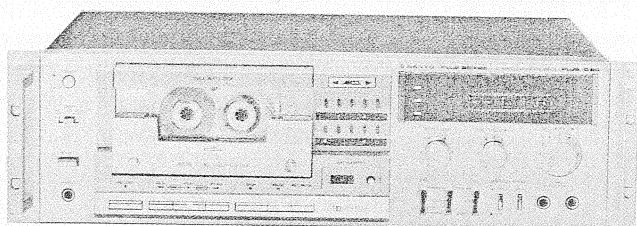


SERVICE MANUAL

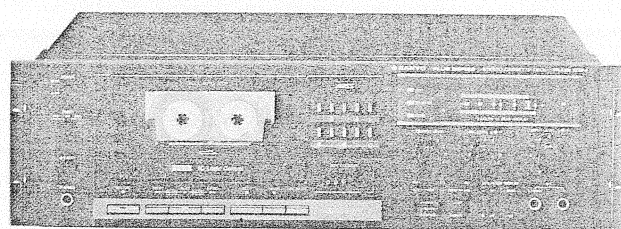
CASSETTE TAPE DECK

**SANYO****PLUS D80**

(EUROPE)



(SILVER)



(BLACK)

SPECIFICATIONS

Tape	Metal, CrO ₂ , FeCr, Low noise and Standard tape
Recording system	AC bias, 4-track stereo
Erasing system	AC erasing, 2-track
Tape speed	4.75 cm/sec. (1-7/8 i.p.s.)
Recording time	60 min. (C-60)
Rewind and fast forward time	100 sec. (C-60)
Wow and flutter	0.04% WRMS
Frequency response	20 - 20,000Hz (metal) 20 - 17,000Hz (CrO ₂) 20 - 17,000Hz (Fe-Cr) 20 - 13,000Hz (normal)
Signal to noise ratio	67dB (Dolby on, CrO ₂ tape) 59dB (Dolby off, CrO ₂ tape)
Input	MIC: 400 ohms to 10 kohms (0.4mV) DIN (REC/PLAY): 6.8 kohms (0.4mV) LINE IN: 50 kohms (80mV)
Output	DIN (REC/PLAY): 3 kohms (0.53V) LINE OUT: 3 kohms (0.53V) PHONES: 8 ohms to 10 kohms (0 - 60mV)
SUPER D	Encode out: 85mV Decode in: 0.53V Decode out: 100mV Encode in: 85mV
Power source	AC: 115/220V, 50Hz
Power consumption	35W
Dimensions (Approx.)	440(W) x 291(D) x 139(H) mm (17-5/16" x 11-7/8" x 5-1/2")
Weight (Approx.)	7.7kg

* Specifications subject to change without notice.

HOW TO DETACH THE CABINET AND CHASSIS

1. HOW TO DETACH THE SIDE PANELS

Unfasten 10 screws (Y123...Flat Head Screw 4x10mm, Y122...Flat Head Screw 4x25mm) fixing the right and left side panels.

2. HOW TO DETACH THE CABINET

Unfasten 4 screws (Y121...Pan Head Tapping Screw 3x6mm, Y113...Bind Head Screw 3x10mm) fixing the cabinet.

3. HOW TO DETACH THE FRONT PANEL

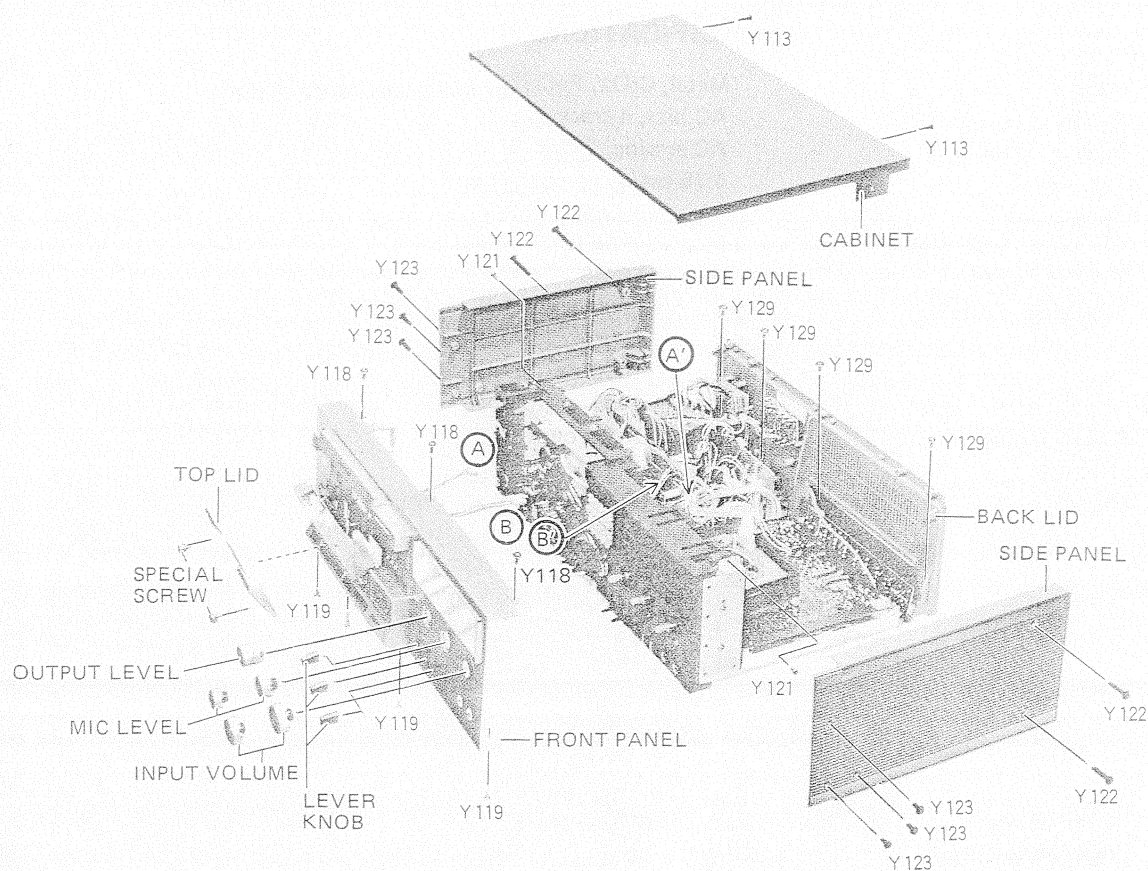
- Pull out 3 lever knobs for BIAS, EQ, Dolby NR. Pull out 1 rotary knob for output level control. Pull out 2 rotary knobs for MIC/DIN level control and 2 rotary knobs for INPUT level control.
- Unfasten 7 screws (Y118...Pan Head Tapping Screw with Washer 3x10mm, Y119...Flat Head Tapping Screw 3x10mm, Y120...Flat Head Tapping Screw 3x14mm) and remove the sockets A and B.

4. HOW TO DETACH THE TOP LID

Unfasten 2 special screws fixing the top lid.

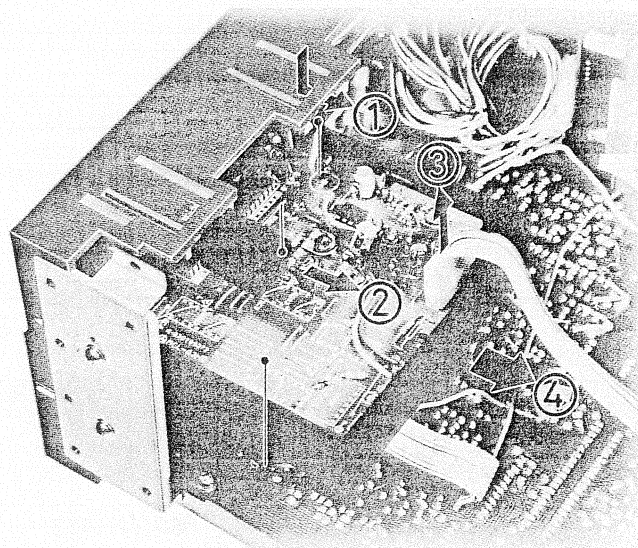
5. HOW TO DETACH THE BACK LID

Unfasten 4 screws (Y129...Pan Head Screw with Washer 3x8mm) fixing the back lid.



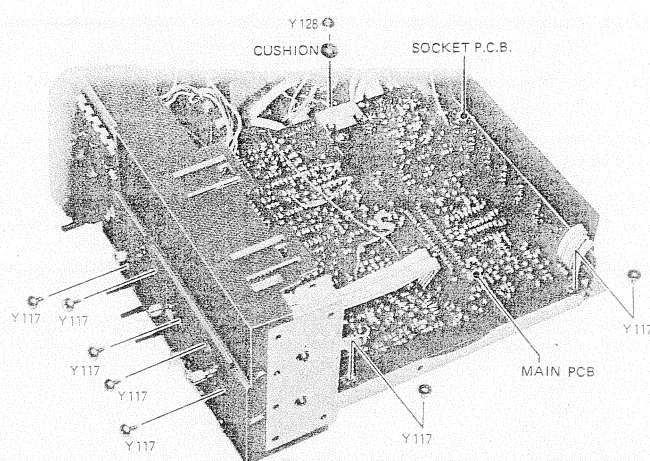
6. HOW TO DETACH THE LEVEL METER P.C.BOARD

Remove 2 brackets with depressing as shown figure and pull out to indicated (4). Then remove the socket (4).



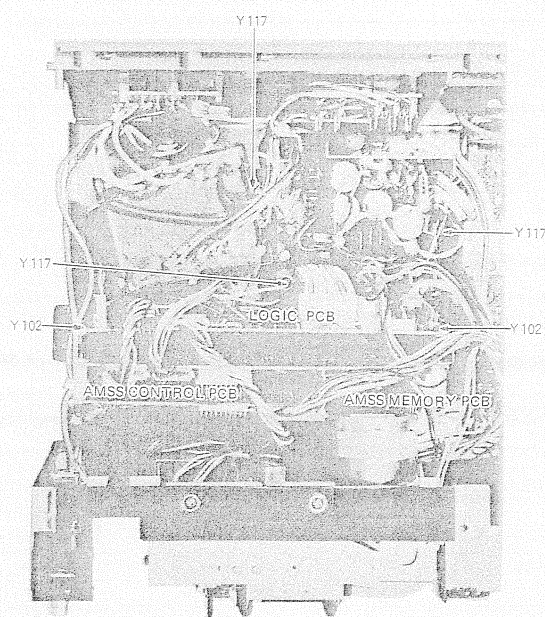
7. HOW TO DETACH THE MAIN P.C.BOARD AND SOCKET P.C.BOARD

After removing the back lid and level meter P.C.Board depending procedure 5 and 6, unfasten 8 screws (Y117... Pan Head Tapping Screw with Washer 3x8mm, Y128... Pan Head Tapping Screw with External Tooth Lock Washer 3x8mm).

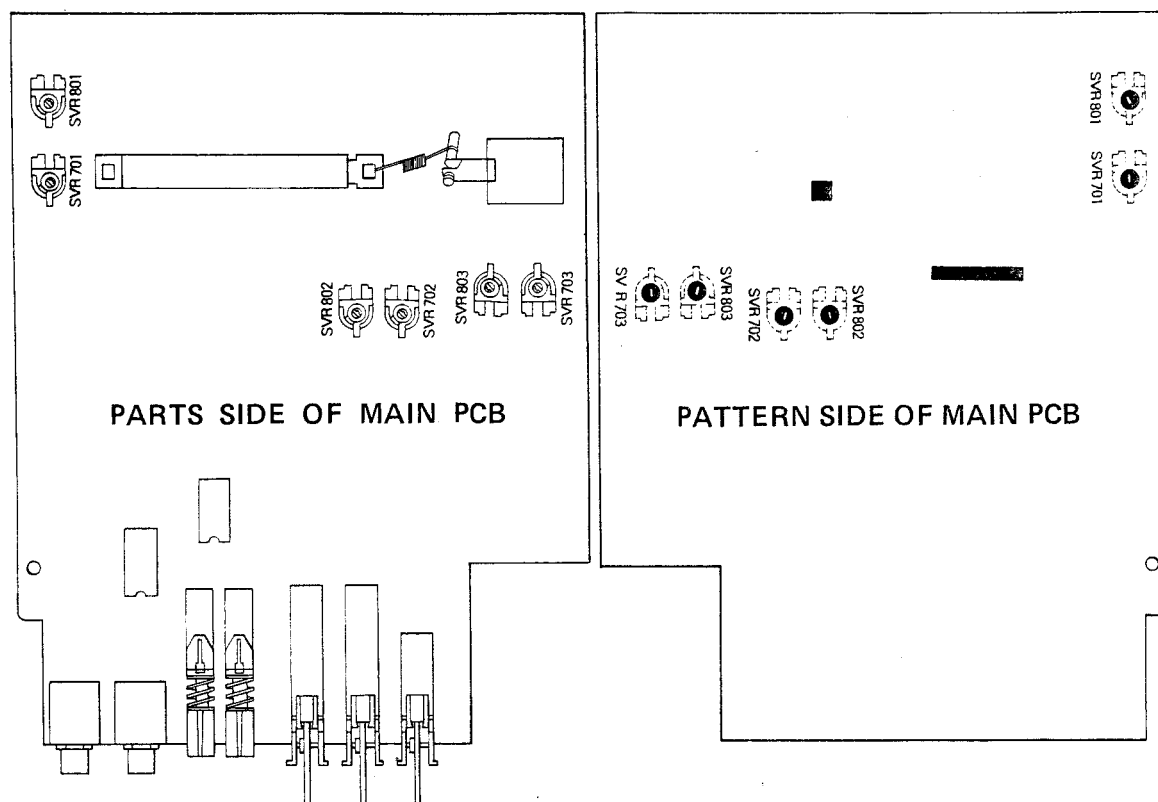


8. HOW TO DETACH THE AMSS, LOGIC DC POWER SUPPLY P.C.BOARD

Unfasten 2 screws (Y102...Pan Head Tapping Screw with Spring Washer 3x6mm) fixing AMSS Memory, AMSS Control and AMSS Logic P.C.Boards. Then remove the lead coloured brown from the wrapping pin terminal. To detach the DC Power Supply P.C.Board, unfasten 3 screws (Y117...Pan Head Tapping Screw with Washer 3x8mm).



PARTS LOCATION



AMPLIFIER ADJUSTMENTS

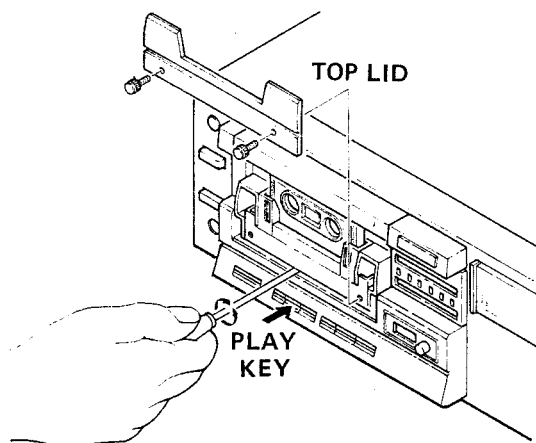
Items of adjustments	Tape to be used	Points of measurement	Input terminal	Frequency	Input level	BIAS switch	EQ switch	Dolby switch	Places of adjustment	Value
Head azimuth	(10kHz~15dB)	LINE OUT					NORMAL	OFF	Re-adjustment of head	Max.
Playback output	(Dolby tape)	LINE OUT					NORMAL	OFF	SVR701 SVR802	0.75V
Playback frequency response		LINE OUT		1kHz 12.5kHz			NORMAL CrO ₂ or METAL	OFF	Head azimuth and other	-3~+3dB
VU Indicator	Blank tape	LINE OUT VU Indicator	LINE IN	1kHz	-23dB ↓ -43dB ± 2dB	NORMAL	NORMAL	OFF	SVR1 SVR2 SVR3	0.53V 0~20dB
REC/PLAY Frequency response	AC211	LINE OUT	LINE IN	1kHz 10kHz	-43dB	NORMAL	NORMAL	OFF	SVR703 SVR803	±0~+0.5dB
Record gain	AC511	LINE OUT	LINE IN	1kHz	-23dB	CrO ₂	CrO ₂	OFF	SVR702 SVR802	0.53V

ADJUSTMENT AND CHECKING OF AMPLIFIER SECTION

When adjusting or checking, keep the MIC LEVEL mixing control knobs to MIN, and the OUTPUT LEVEL control knob at MAX position.

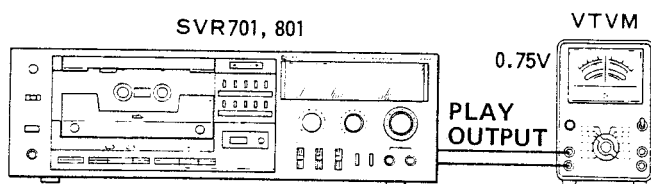
1. Adjustment of Head Azimuth

- Load with test tape (VTT-658, etc.), and press the PLAY button.
 - Turn azimuth adjusting screw until playback output is maximized.
 - Repeat adjustment (steps a, b) on both channels, and both sides of tape.
- * For the procedure of detaching the top lid, refer to the instructions "How to detach the cabinet and P.C.Board" on page 1.



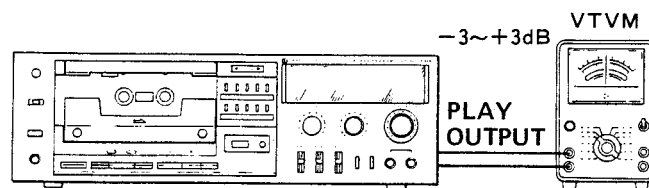
2. Adjustment of playback output

- Load with test tape (MTT-150, Dolby tape), and press the PLAY button.
- Adjust SVR-701, 801 until the playback output becomes 0.75V.



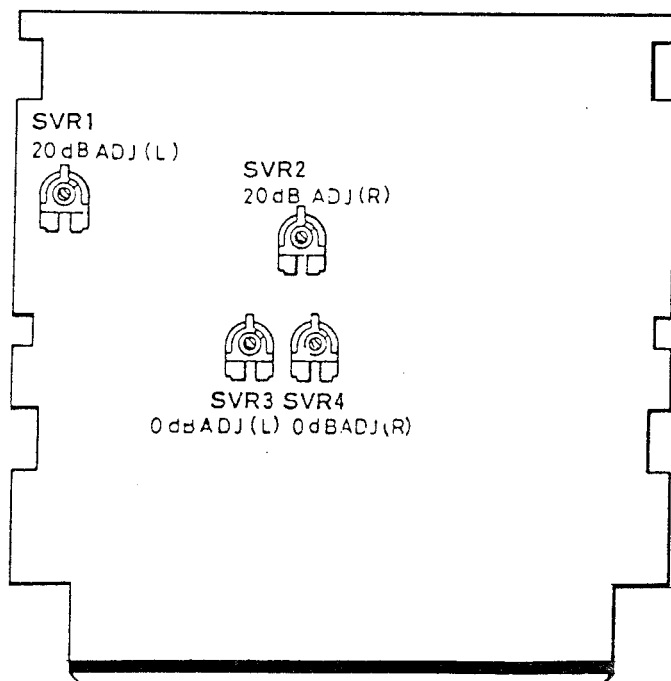
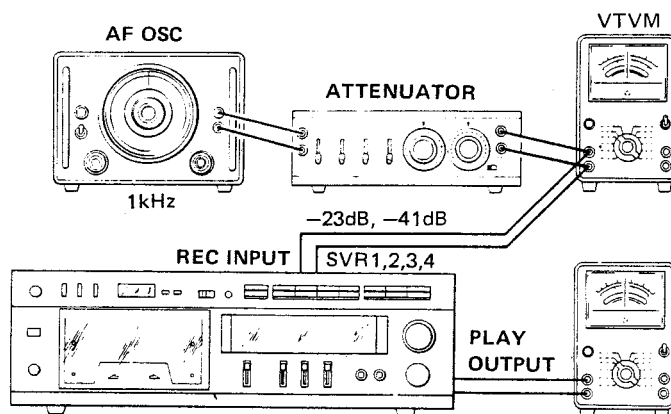
3. Checking of playback frequency response

- Load with test tape (TMT-6161, etc. for NORMAL/ TMT-6165, etc. for CrO₂ or METAL). Set the EQ select switch to NORMAL, CrO₂ or METAL. Then turn off Dolby NR and press the PLAY button.
- Taking the playback output of 1 kHz as 0 dB, make sure the playback output of 12.5 kHz are found between -3 dB and +3 dB respectively.
- If the requirements are not made, repeat the head azimuth and other adjustment.



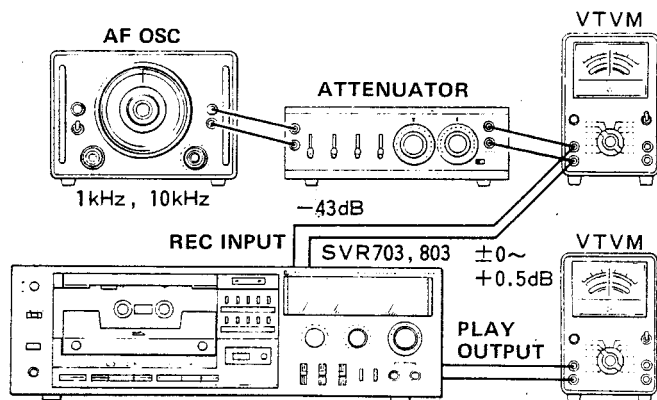
4. Adjustment of level meter

- Feed input signal -23 dB (1 kHz) into recording input terminal. Set in record mode.
 - Turn line input level control knob until the monitor output becomes 0.53V.
 - Make sure the 0 dB indicated by level meter is disappear turning SVR-3, 4. Then adjust SVR-3, 4 until level meter reads 0 dB.
 - Change input signal to -41 dB (1 kHz). Adjust SVR-1, 2 until level meter reads -20 dB.
- * When adjusting, set the DISPLAY switch at VU position.



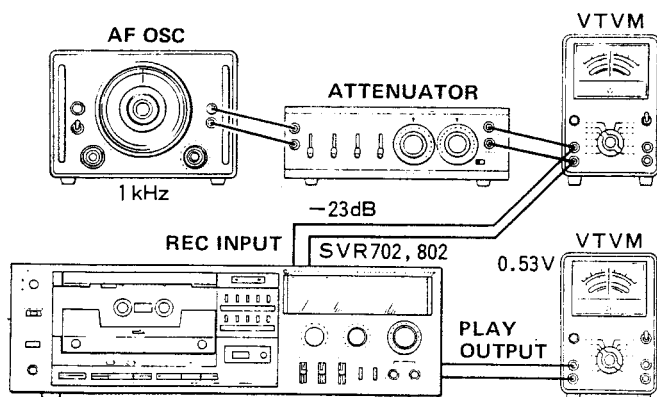
5. Adjustment of record/playback frequency response

- Load with test tape (AC211 etc.). Turn line input level control knob to the position achieved in 4-b. Set the BIAS, EQ select switch to **NORMAL** position.
- Feed input signal -43 dB (1 kHz, 10 kHz) into record input terminal.
Record this signal.
- Play it back. Taking the frequency response of 1 kHz as 0 dB, adjust SVR-703, 803 until the output of 14 kHz becomes ± 0 to ± 0.5 dB.



6. Adjustment of Record Gain

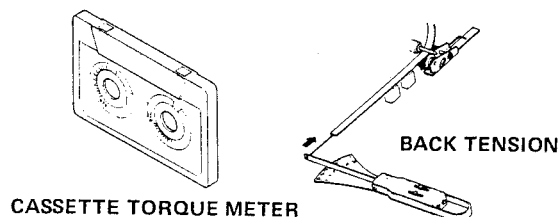
- Load with test tape (AC511 etc.). Turn line input level control knob to the position achieved in 4-b. Set the BIAS, EQ select switch to **CrO₂** position.
- Record -23 dB (1 kHz) signal.
- The monitor output at this time being 0.53V, adjust SVR-702, 802 until the playback output of signal becomes 0.53V.



ADJUSTMENT OF MECHANISM

A. Measurement of torque tension

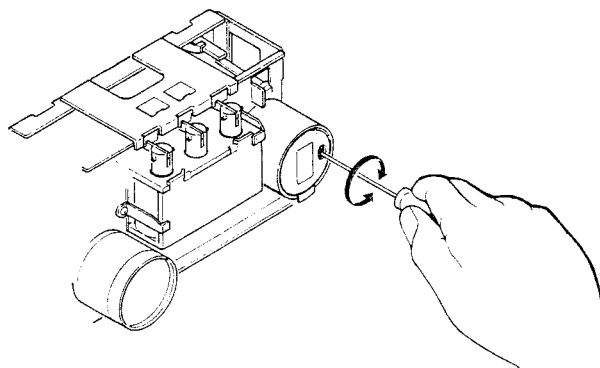
- Before measurement, make sure the parts are normally functioning by checking visually. Check to see the pinch roller is kept in clean condition, in particular.
- Set a torque meter, as shown in the drawing, into the mechanism. This meter permits checking of each item of measurement at a glance.
- Tie the tape to the tension gauge as shown in the drawing, and wind the other end around the reel hub, and measure.



Measurement	Take-up torque	Back tension	Pinch pressure
Instrument	Cassette torque meter	Cassette torque meter	Tension gauge, bar scale
Play	35 to 60 gr-cm	25 ~ 65gr.cm	350 $\pm$ 50gr
Fast-forward	70 to 130 gr-cm	25 ~ 65gr.cm	
Rewind	70 to 130 gr-cm	50gr.cm	

B. Adjustment of tape speed (motor speed)

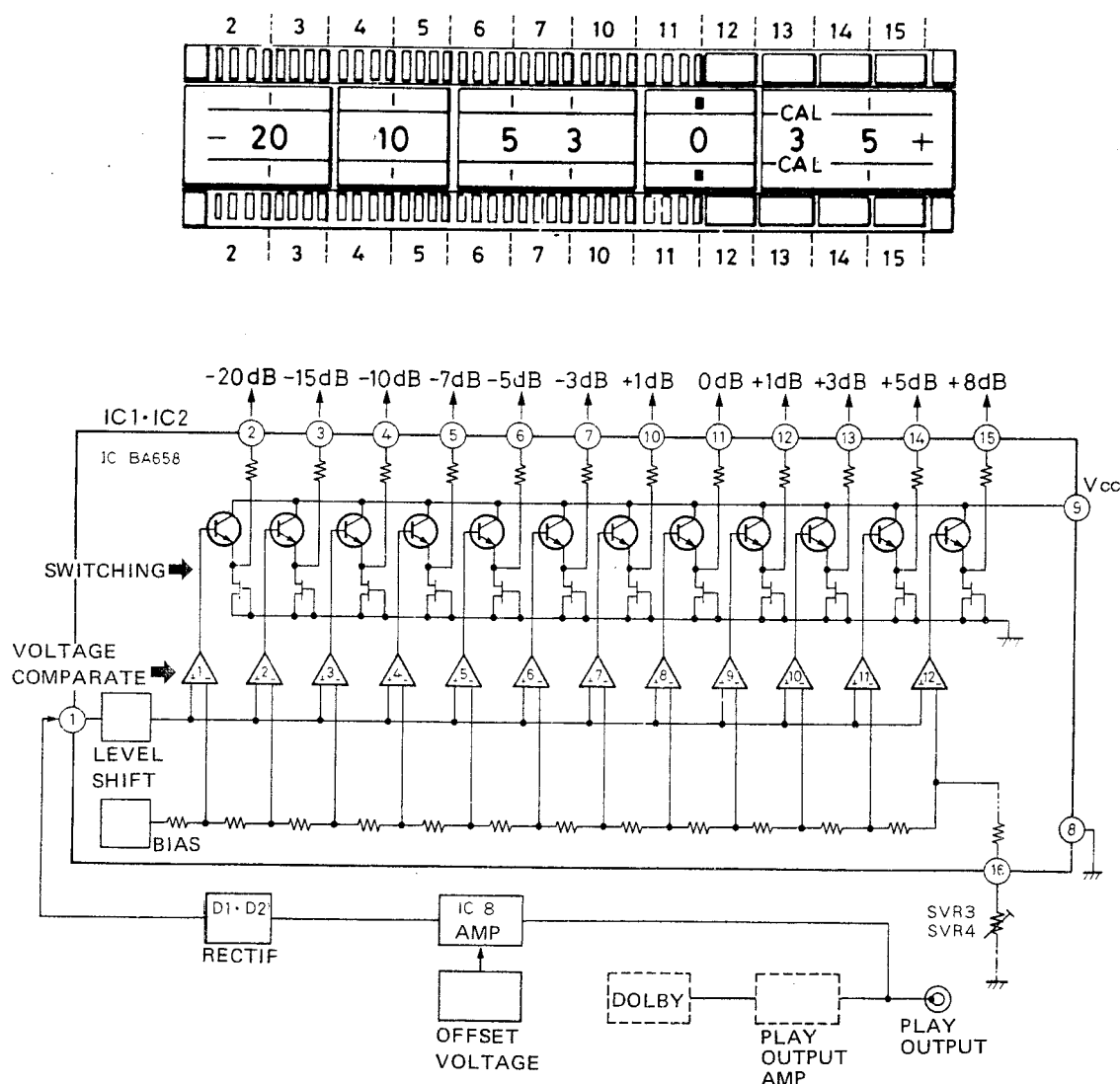
- Dismount the cabinet according to the procedure described in page 2.
- Connect a counter to playback output terminal (on the back panel of the set). Load with a test tape (MTT-111, or the like), and play it back.
- Turn the semivariable resistor for adjustment of motor speed by using a screwdriver (having a blade width of about 2 mm) as shown on the right, and adjust so that the counter reading may be about 2980 to 3000 Hz.
(Within 4.75 cm $\pm$ 1.5%)



FL DISPLAY LEVEL METER

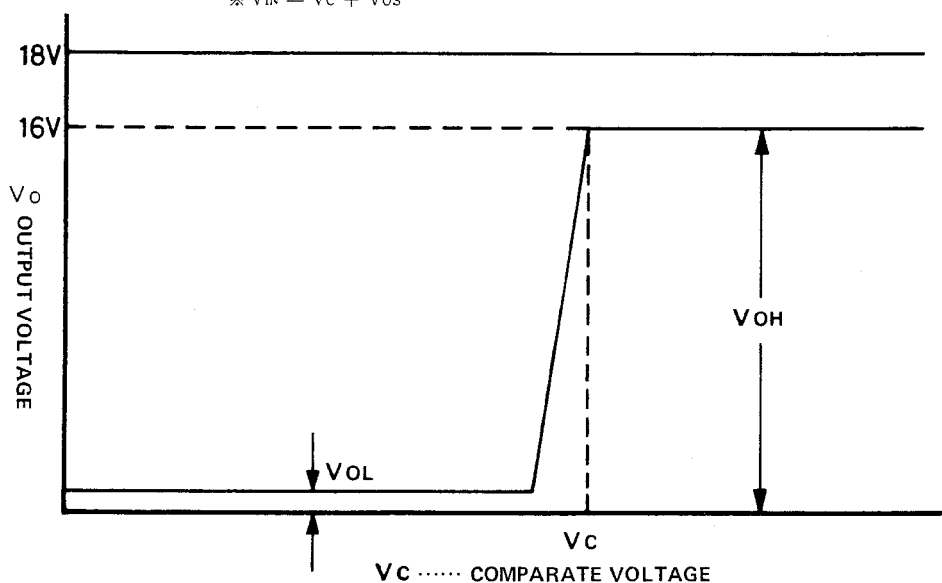
The FL meter is a triode consisting of plate, grid and filament. The plate, coated with fluorescent material, is designed to be illuminated only when plate current flows. Therefore, in order to illuminate the plate, it is necessary to control the voltage applied to the plate and grid. The grid is always impressed with positive voltage, and accelerating the thermions generated at the filament the fluorescent material is illuminated only when position voltage is applied to the plate. When the plate voltage is 0V, since the cut-off state is established, no plate current flows, and the fluorescent material is not illuminated. Figure 1 illustrates the FL meter, and pin nos. 2 through 15 show plate terminal.

The output from LINE OUT amplifier is amplified at IC8, supplied with offset voltage, rectified by D1 and D2, and then applied to terminal No.1 of IC1, IC2. These circuits IC1, IC2 as shown in Fig. 2, consist of voltage compare circuits and switching circuits, in which based on the constant voltage power source supplied to terminal No.9, the voltage fed from terminal No.1 is compared. As a result of voltage comparison, the switching circuits are operated, and the plate voltage of FL meter is controlled, keeping the plate output terminal at 16V or 0V. SVR3, SVR4 are variable resistors for setting the reference compare voltage at the time of specified record level input. Figure 3 shows the input voltages (V_{IN}) of IC1, IC2 required to light up the indicators of FL meter.



		Input Voltage (VIN)			Remark
		Min	Standard	Max	
Output voltage LOW level VOL		— V	0 V	0.50 V	
Output voltage HIGH level VOH		14.0 V	16.0 V	—	
Off-set Vos		1.1 V	1.35 V	1.60 V	Voltage when 16V output of
Compare Vc	—20 dB	— V	0.30 V	—	Pin No. 2 is measured.
"	—15 dB	0.40 V	0.46 V	0.52 V	Pin No. 3 is measured.
"	—10 dB	0.65 V	0.73 V	0.83 V	Pin No. 4 is measured.
"	—7 dB	0.92 V	0.99 V	1.07 V	Pin No. 5 is measured.
"	—5 dB	1.15 V	1.23 V	1.30 V	Pin No. 6 is measured.
"	—3 dB	1.43 V	1.52 V	1.61 V	Pin No. 7 is measured.
"	—1 dB	1.77 V	1.88 V	2.00 V	Pin No. 10 is measured.
"	0 dB	—	2.10 V	—	Pin No. 11 is measured.
"	+1 dB	2.21 V	2.34 V	2.49 V	Pin No. 12 is measured.
"	+3 dB	2.76 V	2.93 V	3.10 V	Pin No. 13 is measured.
"	+5 dB	3.37 V	3.66 V	3.97 V	Pin No. 14 is measured.
"	+8 dB	4.72 V	5.12 V	5.76 V	Pin No. 15 is measured.

$$* V_{IN} = V_c + V_{os}$$



AMSS (Automatic Music Select System)

This mechanism basically detects the inter-music non-recorded portion and converts this detected signal to pulse to let the counter count.

When the program memory and inter-music counting memory assume the "H" state, this mechanism picks out a signal with coincidence detecting circuit and operates the plunger. Moreover, this mechanism consists of the following control, operating, memory, coincidence detecting and display units.

(1) Control unit

Equalizer amplifying aural signal (AF), this unit detects the non-recorded (inter-music) portion of this signal internal, converts thus detected signal to a pulse signal, and then inputs pulse signal to the counter of the memory unit.

In this control unit, there are also the setting circuit for mute in operating of switch and for the initial PLAY state time (2 sec.) in operating of AMSS, oscillation circuit for flashing of the directional indicator in operating of AMSS, one-shot circuit to convert a coincidence detected signal to a plunger driving signal, initializing circuit (to operate in the initial stage), gate circuit for each mute, etc. .

(2) Operating unit

In this unit, there are program switches (S401 ~ S409) and clear switch (S410). Depressing of each switch outputs the corresponding signal.

(3) Memory unit

In the memory unit, there are two circuits; namely, program memory and inter-music counting memory. In the program memory, there are the same number (nine) of R/S flip-flop circuits, each composed of two NAND gates, as many as program switches. Such a R/S flip-flop circuit is operated by depressing a program switch of the operating unit and reset by the clear switch or initializing circuit (RA-1.C460). Moreover, the same is also reset after releasing AMSS from operation.

Memory process of counter method is taken in the inter-music counting memory, and the "H" state is shifted every time an inter-music detected signal is inputted.

Under any condition of AUTO STOP, STOP SW., INITIALIZE, CLEAR SW., and when not programmed, CL (clear) terminals assume the "H" state; and this memory is reset.

NOTE: The reset state of this memory is such that Q₀ output (three pins of IC416) is in the "H" state.

(4) Coincidence detecting unit

If both the program memory and the inter-music counting memory are in the "H" state, a signal of the coincidence detecting circuit is detected and then led to the plunger driving signal generator circuit of the control unit.

Here, one to nine outputs of the program memory and Q_{OUT} outputs of the inter-music counting memory form and AND circuit per number of one to nine. That is, nine AND circuits are formed. Furthermore, outputs of these AND circuits integrated by OR circuits are referred to as the coincidence detecting circuit.

(5) Display circuit

In the display circuit, there are AMSS program indicator and AMSS directional indicator. The AMSS program indicator displays only the program memory output in programming (when the mechanism is in stop), and it displays also the inter-music counting memory output in operating of AMSS.

After releasing of AMSS from operation, the program memory is reset; thus display is erased. Besides, the same memory has been reset when not programmed; thus it does not give a display.

The AMSS directional indicator flashes in operating of AMSS to indicate the direction of tape travel, acting upon AM OSC signal.

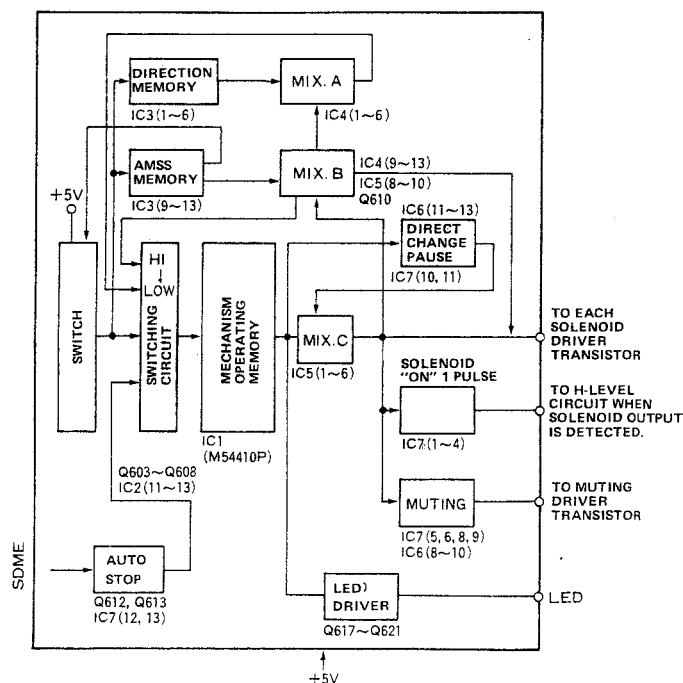
Mechanism Control Circuit

Mainly composed of the mechanism control IC (M54410P), this circuit consists of the AMSS circuit, auto-stop circuit and muting circuit.

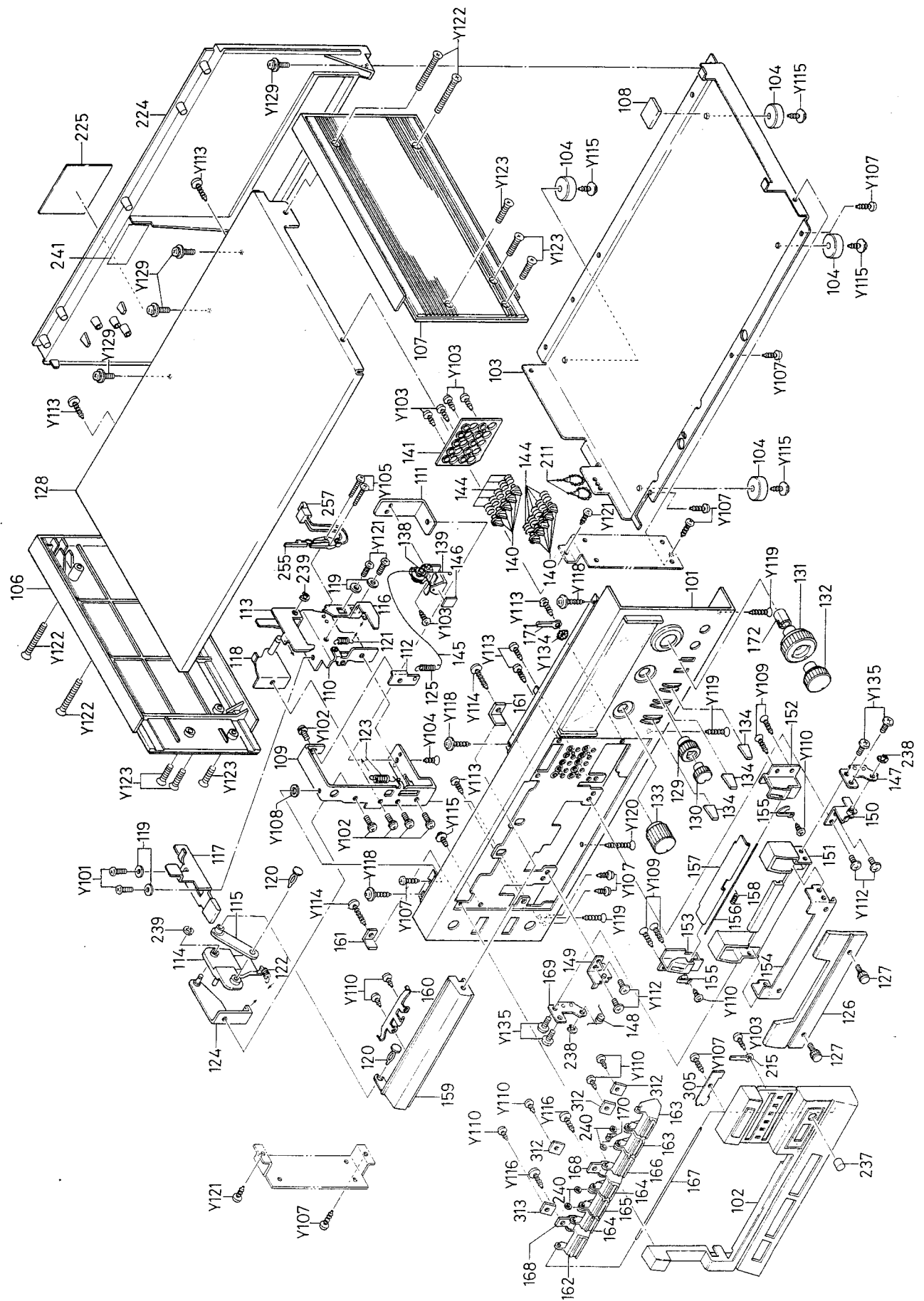
Each control signal enters the switching circuit from a switch and operates IC1 (M54410P). Output of IC1 enters each circuit where it is treated to become a signal to operate the solenoid, motor, LED, muting transistor, etc. .

AMSS memory generates AMSS signal from a switch and simultaneously feeds this signal back to a switch as its input so that signals other than STOP signal do not enter it from a switch.

At the same time AMSS memory temporarily applies PLAY signal to the switching circuit. Besides, output of IC1 is inputted to MIX. B after passing through MIX. C, and there it becomes a signal to pull the AMSS solenoid. This output and output from the directional memory are treated by MIX. A to become F. FWD or REW signal for switching circuit.



CABINET EXPLODED VIEW



PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
PACKING				CABINET			
	141-6-133T-12200	Individual Carton (Silver)	1	129	141-0-163T-59630	Rotary Knob Assembly, MIC/ DIN Left (Black)	1
	141-6-133T-12203	Individual Carton (Black)	1	130	141-0-163T-59700	Rotary Knob Assembly, MIC/ DIN Right (Silver)	1
	141-6-144T-53500	Pad	2	130	141-0-163T-59730	Rotary Knob Assembly, MIC/ DIN Right (Black)	1
	141-6-317T-21100	Pad, Set	1	131	141-0-163T-59800	Rotary Knob Assembly, INPUT LEVEL Left (Silver)	1
	141-6-231T-50700	Polyethylen Bag, 500x700mm, Set	1	131	141-0-163T-59830	Rotary Knob Assembly, INPUT LEVEL Left (Black)	1
	141-6-231T-20300	Polyethylen Bag, 200x300mm, Inst. Manual	1	132	141-0-163T-59900	Rotary Knob Assembly, INPUT LEVEL Right (Silver)	1
	141-6-231T-10300	Polyethylen Bag, 100x300mm, Power Cord	1	132	141-0-163T-59930	Rotary Knob Assembly, INPUT LEVEL Right (Black)	1
	141-6-317T-19200	Pad, Handle (Black only)	1	133	141-0-163T-60000	Rotary Knob Assembly, OUTPUT LEVEL (Silver)	1
				133	141-0-163T-60030	Rotary Knob Assembly, OUTPUT LEVEL (Black)	1
ACCESSORY				134	141-2-162T-16001	Lever Knob, BIAS, EQ, NR (Silver)	3
	141-6-410T-35701	Instruction Manual	1	134	141-2-162T-16030	Lever Knob, BIAS, EQ, NR (Black)	3
	141-6-419T-06600	Miscellaneous, Illustration for Inst. Manual	1	135	141-0-214T-04500	Bracket Frame Assembly, PEAK DISPLAY	1
	4-243T-13302	Lead Cord Assembly	1	136	141-2-310T-20700	Bracket, Side Panel Left mtg.	1
	4-241T-12900	Cassette Tape	1	137	141-2-310T-20701	Bracket, Side Panel Right mtg.	1
	141-0-171T-15900	Handle Assembly (Black only)	2	138	141-2-581T-17300	Gear, for Air Dumper	1
CABINET				139	141-2-464T-33900	Fixer, Air Dumper Rope	1
101	141-0-122T-31101	Front Panel Assembly (Silver)	1	140	141-2-161T-68900	Push Button, AMSS	10
101	141-0-122T-31131	Front Panel Assembly (Black)	1	141	141-2-210T-15500	Bracket, Push Button	1
102	141-0-153T-54301	Escutcheon Assembly (Silver)	1	142	141-2-472T-01001	Lug	2
102	141-0-153T-54330	Escutcheon Assembly (Black)	1	143	141-2-447T-67700	Cushion, 15x40x1mm	5
103	141-2-125T-18801	Bottom Lid	1	144	141-2-855T-37100	Spring Coil, Push Button	10
104	141-0-174T-05101	Stand Assembly	4	145	141-2-340T-05003	Rope, 0.5φx200mm, Dumper	1
105	141-2-210T-08900	Bracket, Bottom Lid mtg.	3	146	141-2-447T-31303	Cushion, 10x10x4mm	1
106	141-0-123T-03603	Side Panel Assembly, Left (Silver)	1	147	141-2-742T-41501	Lever, Supporting Top Lid (Silver)	1
106	141-0-123T-03604	Side Panel Assembly, Left (Black)	1	147	141-2-742T-41530	Lever, Supporting Top Lid (Black)	1
107	141-0-123T-03700	Side Panel Assembly, Right (Silver)	1	148	141-2-852T-58800	Spring Wire, Bracket Opening/ Closing	1
107	141-0-123T-03701	Side Panel Assembly, Right (Black)	1	149	141-0-310T-31800	Bracket Assembly (Silver)	1
108	141-2-447T-16700	Cushion, 10x10x6mm	1	149	141-0-310T-31830	Bracket Assembly (Black)	1
109	141-2-310T-31400	Bracket, EJECT	1	150	141-0-310T-31900	Bracket Assembly (Silver)	1
110	141-2-310T-31500	Bracket, EJECT Switch mtg.	1	150	141-0-310T-31930	Bracket Assembly (Black)	1
111	141-2-310T-31600	Bracket, Air Dumper mtg.	1	151	141-2-224T-10300	Bracket Lid, Cassette Compartment (Silver)	1
112	141-2-310T-31700	Bracket, Rope Tension Adjustment	1	151	141-2-224T-10330	Bracket Lid, Cassette Compartment (Black)	1
113	141-2-742T-41100	Lever, Cassette Case Lock (Silver)	1	152	141-2-210T-16500	Bracket, Cassette Holder Right (Silver)	1
113	141-2-742T-41130	Lever, Cassette Case Lock (Black)	1	152	141-2-210T-16530	Bracket, Cassette Holder Right (Black)	1
114	141-2-742T-41200	Lever, EJECT Relaytion	1	153	141-2-210T-16600	Bracket, Cassette Holder Left (Silver)	1
115	141-2-742T-41300	Lever, EJECT Relaytion	1	153	141-2-210T-16630	Bracket, Cassette Holder Left (Black)	1
116	141-2-742T-41400	Lever, EJECT Button Lock	1	154	141-2-310T-31300	Bracket, Top Lid (126) mtg. (Silver)	1
117	141-0-731T-76600	Slide Assembly, EJECT (Silver)	1	154	141-2-310T-31330	Bracket, Top Lid (126) mtg. (Black)	1
117	141-0-731T-76630	Slide Assembly, EJECT (Black)	1	155	141-2-853T-65300	Spring Plate, Cassette Depressed	2
118	141-0-715T-05500	Bracket Lever Assembly, Lever (113) mtg.	1	156	141-2-753T-78800	Shaft, Cassette Compartment	1
119	141-2-352T-39100	Spacer, Lever (116), Silde (117) mtg.	4	157	141-2-133T-14900	Cassette Compartment Lid (Silver)	1
120	141-2-210T-19200	Bracket, Lever Connection Shaft	2	157	141-2-133T-14930	Cassette Compartment Lid (Black)	1
121	141-2-855T-45400	Spring Coil, Lever (116) Rewinding	1	158	141-2-851T-91800	Spring Coil, Compartment Opening/Closing	1
122	141-2-855T-45500	Spring Coil, Lever (114) Rewinding	1	159	141-2-124T-26300	Top Lid, Up Side (Silver)	1
123	141-2-855T-45600	Spring Coil, Lever (113) Rewinding	1	159	141-2-124T-26330	Top Lid, Up Side (Black)	1
124	141-0-715T-05600	Bracket Lever Assembly, Lever (114) mtg.	1	160	141-2-853T-64800	Spring Plate, Cassette Compartment Depressed	1
125	141-2-855T-52300	Spring Coil, Rope Tension	1	161	141-2-224T-10400	Bracket Lid, Top Lid (159) Shaft	2
126	141-2-124T-26200	Top Lid, Bottom Side (Silver)	1	162	141-2-161T-70230	Push Button, RECORD (Silver)	1
126	141-2-124T-26231	Top Lid, Bottom Side (Black)	1	162	141-2-161T-70240	Push Button, RECORD (Black)	1
127	141-2-421T-29200	Special Screw, Fixing Top Lid (Silver)	2	163	141-2-161T-68700	Push Button, PAUSE, REC MUTE (Silver)	2
127	141-2-421T-29230	Special Screw, Fixing Top Lid (Black)	2	163	141-2-161T-68730	Push Button, PAUSE, REC MUTE (Black)	2
128	141-2-111T-39100	Cabinet (Silver)	1	164	141-2-161T-68800	Push Button, REW, F FWD (Silver)	2
128	141-2-111T-39140	Cabinet (Black)	1				
129	141-0-163T-59600	Rotary Knob Assembly, MIC/ DIN Left (Silver)	1				

PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
CABINET				CHASSIS			
164	141-2-161T-68830	Push Button, REW, F FWD (Black)	2	243	141-6-479T-07700	Label, Voltage Select	1
165	141-2-161T-70200	Push Button, PLAY (Silver)	1	ELECTRICAL PARTS			
165	141-2-161T-70250	Push Button, PLAY (Black)	1	251	4-300T-13800	Power Transformer	1
166	141-2-161T-70300	Push Button, STOP (Silver)	1	252	4-238T-12873	Power Switch	1
166	141-2-161T-70330	Push Button, STOP (Black)	1	253	4-243T-77172 4-243T-83200	or Power Cord	1
167	141-2-753T-76200	Shaft, Supporting Push Button	1	254	4-612T-14700	Lamp, for Cassette Compartment	1
168	141-2-210T-15400	Bracket, Shaft (167) Depressed	2	255	4-231T-84200	Switch, EJECT	1
169	141-0-742T-41500	Lever Assembly, Supporting Top Lid (Silver)	1	256	4-231R-14800	Slide Switch, Timer Stand-by	1
169	141-0-742T-41531	Lever Assembly, Supporting Top Lid (Black)	1	257	4-235T-74800	Socket, EJECT	1
170	141-2-852T-61500	Spring Wire, Button Grounding	1	258	4-235T-74900	Socket, Timer Stand-by	1
171	123-2-472R-00401	Lug, Button Grounding	1	259	4-264T-09400	Magnetic Coil	1
172	141-2-461T-37700	Pipe, for INPUT LEVEL VOL Shaft	1	260	141-2-383T-04702	Fuse Holder 5P	1
CHASSIS				261	4-234T-04471	Fuse 1A	4
201	141-2-210T-15800	Bracket, PEAK DISPLAY P.C.B. mtg.	2	262	4-234T-06171	Fuse 2.5A	1
202	141-2-365T-44700	Bracket Switch, POWER Switch mtg.	1	MAIN P.C.B. ASS'Y			
203	141-2-310T-31200	Bracket, Bracket PL (229) mtg.	1	301	141-4-233T-14401	P.C.B. Assembly, Main	1
204	141-2-241T-22900	Veil, Pilot	1		4-231T-85500	Slide Switch, BIAS	1
205	141-2-210T-18100	Bracket, REC Plunger mtg.	1		4-231T-85671	Slide Switch, DOLBY NR	1
206	141-2-488T-01710	Pin, REC Plunger	1		4-231T-85600	Slide Switch, EQ	1
207	141-2-352T-29900	Spacer, Memory Control P.C.B.	4		4-238T-05500	Slide Switch, DISPLAY	1
208	141-2-411T-10600	Plate Nut, Spacer mtg.	1		4-238T-05600	Slide Switch, TIMER	1
210	141-2-464T-20671	Fixer, Lead Clamp	11		4-235T-75000	Socket, Level Meter (8P)	1
211	141-2-464T-08700	Fixer, Lead Clamp	10		4-235T-77400	Socket, (12P)	1
212	141-2-447T-32000	Cushion, 3.5x9.5x1mm	2	SVR701, 801, 702, 802	4-222T-39475	Semi fixed Variable Resistor, 10kΩ	4
213	141-2-246T-42801	Sheet, 10x15x0.5mm	1	SVR703, 803	4-222T-39478	Semi fixed Variable Resistor, 100kΩ	2
214	141-2-447T-00801	Cushion, 5x15mm, Mechanism Lever mtg.	1		4-258T-25300	OSC Coil, BIAS	1
215	141-2-472T-00101	Lug	2		4-236T-10572	Plug, for Rec/Play Head (5P)	1
216	141-2-312T-16900	Sub-chassis, PEAK LEVEL P.C.B. mtg.	1	L703,803	4-255T-01900	MX Coil, 100k	2
217	141-2-210T-10900	Bracket, Supporting PEAK LEVEL P.C.B.	1	L701,801	4-253T-01019	Filter, 4.7 mH	2
218	141-2-210T-15701	Bracket, Socket for DISPLAY	1	L702,802	4-253T-01010	High Frequency Choke Coil, 2.2 mH	2
219	141-2-377T-25400	Bracket P.C. Board, AMSS CONTROL P.C.B.	2	L501,551	4-255T-01672	MX Coil, 19k, 100k	2
220	141-2-310T-33800	Bracket, REC/PLAY Switch	1		4-235T-68400	Microphone Socket, Left	1
221	141-2-310T-30800	Bracket, Main P.C.B. mtg.	1		4-235T-68473	Microphone Socket, Right	1
222	141-2-352T-37900	Spacer, LED mtg.	1	141-2-322T-29600	Shield Plate, for Amp P.C.B.	1	
223	141-2-135T-63400	Cover, AMSS LED mtg.	2		IC, NE646, for Dolby	2	
224	141-2-126T-31801	Back, Lid (Silver)	1	IC501, 551		IC, RC4558	1
224	141-2-126T-31831	Back, Lid (Black)	1	IC701,801		Transistor, 2SA999	2
225	141-6-454T-25300	Rating Plate	1	Q701,801		Transistor, 2SC2320	2
226	141-2-445T-23900	Rubber Cushion, Power Cord mtg.	1	Q702,802		Transistor, 2SC2320 or 2SC1815	6
227	141-2-464T-33400	Fixer, for Power Cord	1	Q703,704, 705,803, 804,805			
228	141-2-855T-60200	Spring Coil, Record	1	Q706,806		Transistor, 2SC2320 or 2SC1815	2
229	141-2-374T-15200	Bracket Pilot, Cassette Lamp mtg.	1	Q707,708, 710,807, 808,810		Transistor, 2SC536	6
230	141-2-310T-30900	Bracket, Mechanism Stopper (low)	1	Q711,811, 904,905		Transistor, 2SC2320 or 2SC1815	4
231	141-2-310T-31000	Bracket, Mechanism Stopper (Up)	1	Q906,907, 910,911, 912		Transistor, 2SC2320 or 2SC1815	5
232	141-2-310T-31100	Bracket, Mechanism Stopper (right)	1	Q712,812, 908,909		Transistor, 2SA999 or 2SA1015	4
234	141-2-164T-26700	Slide Knob, TIMER Switch (Silver)	1	D951		Diode, 1N60FM	1
234	141-2-164T-26730	Slide Knob, TIMER Switch (Black)	1	D950		Diode, WZ090	1
235	141-2-161T-65500	Push Button, MPX FILTER & DISPLAY (Silver)	2	RESISTORS			
235	141-2-161T-65530	Push Button, MPX FILTER & DISPLAY (Black)	2	All resistors are Carbon P-type ±5%, 1/4W unless otherwise noted.			
236	141-0-156T-21700	Knob Assembly, POWER (Silver)	1	R501,503, 551,553, 721,821		1MΩ	6
236	141-0-156T-21730	Knob, Assembly, POWER (Black)	1	R502,552, 742,842		100kΩ	4
237	141-2-156T-06101	Knob, Counter mtg. (Silver)	1	R504,554		180Ω	2
237	141-2-156T-06130	Knob, Counter mtg. (Black)	1	R505,555, 745,845, 911		3.3kΩ	5
238	141-2-457T-23100	Special Washer, E-ring 3mm	2	R506,556		47kΩ	2
239	141-2-457T-23600	Special Washer, E-ring 2.5mm	2	R507,557		180kΩ	2
240	141-2-453T-30201	Washer, Push Button mtg.	4	R508,558		270kΩ	2
241	141-6-476T-13800	Indication Label, for FUSE P.C.B.	1				
242	141-2-352T-47200	Spacer, P.C.B. mtg.	1				

PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
MAIN P.C.B. ASS'Y				MAIN P.C.B. ASS'Y			
R705,805		22k Ω	2	C706,806		Ceramic, 47pF $\pm 10\%$ 50V	2
R706,735,806,835		10k Ω	4	C707,807		Electrolytic, 220 μ F 10V	2
R707,807		56k Ω	2	C708,808		Mylar, 0.018 μ F $\pm 10\%$ 50V	2
R708,808		150k Ω	2	C709,710,809,810		Electrolytic, 1 μ F 25V	4
R709,809		33k Ω	2	C711,735,811,835		Electrolytic, 1 μ F 25V	4
R710,810,944		56k Ω	3	C712,812		Electrolytic, 4.7 μ F 25V	2
R712,812		100 Ω	2	C713,813		Semi conductive, 0.047 μ F $\pm 20\%$ 25V	2
R713,813		220k Ω	2	C719,819		Electrolytic, 0.47 μ F 16V	2
R714,738,814,838		12k Ω	4	C720,733,820,833,933		Electrolytic, 4.7 μ F 25V	5
R715,815		6.8k Ω	2	C721,821		Mylar, 0.018 μ F $\pm 5\%$ 50V	2
R716,816		8.2k Ω	2	C722,728,822,828		Mylar, 0.022 μ F $\pm 5\%$ 50V	4
R718,818		470k Ω	2	C723,823		Mylar, 0.0015 μ F $\pm 10\%$ 50V	2
R719,819		15k Ω	2	C724,824		Mylar, 0.047 μ F $\pm 10\%$ 50V	2
R720,820		1k Ω	2	C725,825		Mylar, 0.012 μ F $\pm 10\%$ 50V	2
R724,824		560k Ω	2	C726,826		Mylar, 0.018 μ F $\pm 10\%$ 50V	2
R725,825		1.8k Ω	2	C727,827		Mylar, 0.012 μ F $\pm 10\%$ 50V	2
R722,747,822,847		4.7k Ω	4	C718,818		Electrolytic, 4.7 μ F 25V	2
R726,826,723,823		820 Ω	4	C729,829		Ceramic, 560pF $\pm 10\%$ 50V	2
R727,827,926,933		1k Ω	4	C731,831		Ceramic, 220pF $\pm 10\%$ 50V	2
R723,823		82 Ω	2	C736,836		Electrolytic, 47 μ F 10V	2
R728,828		5.6k Ω	2	C715,815		Electrolytic, 33 μ F 25V	2
R731		10k Ω	1	C734,834		Ceramic, 47pF $\pm 10\%$ 50V	2
R730		2.2k Ω	1	C737,837		Ceramic, 820pF $\pm 10\%$ 50V	2
R729,829		560k Ω	2	C798		Ceramic, 0.001 μ F $\pm 10\%$ 50V	1
R732,832		1M Ω	2	C799		Ceramic, 0.022 μ F $\pm 80\%$ -20% 50V	1
R733,833		150 Ω	2	C910		Electrolytic, 47 μ F 10V	1
R737,837		18k Ω	2	C911,932		Electrolytic, 220 μ F 16V	2
R740,840		4.7k Ω	2	C912		Electrolytic, 220 μ F 16V	1
R743,843		2.7k Ω	2	C923,924		Electrolytic, 100 μ F 16V	2
R744,844		33k Ω	2	C925		Electrolytic, 220 μ F 10V	1
R746,846		2.7k Ω	2	C926		Mylar, 0.0022 μ F $\pm 5\%$ 50V	1
R749,849		2.2k Ω	2	C927		Mylar, 0.0068 μ F $\pm 10\%$ 50V	1
R750,850		1k Ω	2	C928,929		Mylar, 0.0047 μ F $\pm 10\%$ 50V	2
R751,851		2.2k Ω	2	C931		Electrolytic, 470 μ F 25V	1
R753,853		12k Ω	2	C930		Mylar, 0.015 μ F $\pm 10\%$ 50V	1
R754,854		5.6k Ω	2	RCA SOCKET P.C.B. ASS'Y			
R757,857		3.9k Ω	2	302	141-4-233T-14501 4-235T-68772	P.C.B. Assembly, RCA Socket Socket, (6P)	1
R748,848		15k Ω	2	RESISTORS			
R758,858		10k Ω	2	R702,802		Carbon Resistor, 56k Ω $\pm 10\%$ 1/4W	2
R760,860		47 Ω	2	R703,803		Carbon Resistor, 18k Ω $\pm 10\%$ 1/4W	2
R761,861		100 Ω	2	R704,804		Carbon Resistor, 33k Ω $\pm 10\%$ 1/4W	2
R859		68k Ω	1	R758,858		Carbon Resistor, 33k Ω $\pm 10\%$ 1/4W	2
R762,862		220k Ω	2	R759,859		Carbon Resistor, 10k Ω 1/4W	2
R764,864		10k Ω	2	HEADPHONE P.C.B. ASS'Y			
R912,913		390 Ω	2	303	141-4-233T-14600 4-235T-68871	P.C.B. Assembly, Headphone Socket, Headphone	1
R924,925		220 Ω	2	METAL/DOLBY/PEAK P.C.B. ASS'Y			
R929		5.6 Ω	1	304	141-4-233T-14700	P.C.B. Assembly, Metal/Dolby/ Peak LED, SLB26GG	1
R930		Flame proof, 68 Ω $\pm 5\%$ 1/4W	1	R941,942,943		Carbon Resistor, 560 Ω $\pm 10\%$ 1/4W	3
R931		180 Ω	1				
R932		390 Ω	1				
R935,936		27k Ω	2				
R934,937		10k Ω	2				
R928		12k Ω	1				
R938,939		27k Ω	2				
CAPACITORS							
C503,504,553,554,717,817		Electrolytic, 4.7 μ F 25V	6				
C505,555		Ceramic, 1000pF $\pm 10\%$ 50V	2				
C506,556		Mylar, 0.0056 μ F $\pm 5\%$ 50V	2				
C507,557		Mylar, 0.027 μ F $\pm 5\%$ 50V	2				
C508,558		Mylar, 0.0047 μ F $\pm 5\%$ 50V	2				
C502,509,510,552,559,560		Electrolytic, 10 μ F 16V	6				
C512,562		Electrolytic, 0.1 μ F 16V	2				
C501,551		Ceramic, 100pF $\pm 10\%$ 50V	2				
C511,561		Mylar, 0.047 μ F $\pm 5\%$ 50V	2				
C513,563		Electrolytic, 0.33 μ F 16V	2				
C514,564		Electrolytic, 0.33 μ F 16V	2				
C702,802		Ceramic, 470pF $\pm 10\%$ 50V	2				
C703,803		Ceramic, 560pF $\pm 10\%$ 50V	2				
C704,730,804,830		Electrolytic, 10 μ F 16V	4				
C705,805		Ceramic, 0.001 μ F $\pm 10\%$ 50V	2				

PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
AMSS INDICATOR P.C.B. ASS'Y				AMSS LOGIC P.C.B. ASS'Y			
305	141-4-233T-14800	P.C.B. Assembly, AMSS Direction Indicator LED, G5533TB, Green Socket, (3P)	1	R614,617		22Ω	2
	4-235T-75100		2	R616		1kΩ	1
			1	R629,695		100kΩ	2
TOUCH KEY P.C.B. ASS'Y				R642,643,655,657,659		4.7kΩ	5
306	141-4-233T-15000	P.C.B. Assembly, Touch key for Cassette	1	R645,647,663,664,665,666		1.2MΩ	6
	4-231T-95800	Switch, Rec, Play, Stop, Rewind, Pause, Rec Mute	7	R654,656		560kΩ	2
	4-235T-75200	Socket, (9P)	1	R660		18kΩ	1
AMSS LOGIC P.C.B. ASS'Y				R679		1.5kΩ	1
307	141-4-233T-15101	P.C.B. Assembly, AMSS Logic	1	R603		18kΩ	1
	4-236T-10293	Plug (2P)	1	R604,620,638,639,676		18kΩ	5
	4-236T-10200	Plug (3P)	2	R605,606,607		15kΩ	3
	4-236T-10278	Plug (11P)	1	R608		15kΩ	1
	4-236T-10572	Plug (5P)	2	R609		1MΩ	1
	4-236T-10576	Plug (9P)	1	R610,652		10kΩ	2
	4-235T-77700	Socket (7P)	1	R612		1.5MΩ	1
	4-235T-77871	Socket (8P)	1	R601		10Ω	1
	4-236T-10272	Plug (3P)	1	R621		2.2kΩ	1
	4-221T-04300	Resistor	1	R622		10kΩ	1
IC601		IC, M54410P	1	R624		22Ω	1
IC602,603		IC, TC4001BP or TP4001BN	2	R628		560Ω	1
IC604		IC, TC4081BP or TP4081BN	1	R611		560Ω	1
IC605		IC, TC4071BP	1	R630,636,637,661,662		22kΩ	5
IC606		IC, TC4011BP or TP4011BN	1	R631,632,633,640		22kΩ	4
IC607		IC, TC4049BP	1	R634,691,692		22kΩ	3
Q601		Transistor, 2SA999 or 2SC1015	1	R635		22kΩ	1
Q602,603,604,605,606,607		Transistor, 2SC2320 or 2SC1815	6	R650		47Ω	1
Q608,609,610,611,614,615		Transistor, 2SC2320 or 2SC1815	6	R644		390kΩ	1
Q616,617,619,620,621		Transistor, 2SC2320 or 2SC1815	5	R651		1MΩ	1
Q630,631		Transistor, 2SC2320 or 2SC1815	2	R653		1MΩ	1
Q612,613		Transistor, 2SC2320 or 2SC1815	2	R641		470kΩ	1
D601,602,603,604,605,606		Diode, DS442X	6	R649		560Ω	1
D607,608,609,610		Diode, DS442X	4	R667		1MΩ	1
D614,615,617,618		Diode, DS442X	4	R668		47Ω	1
D619,620,621,622,623,624		Diode, DS442X	6	R669		1.5MΩ	1
D625,628,629,630		Diode, DS442X	4	R670		10kΩ	1
D631,633,634,635		Diode, DS442X	4	R681		1.5MΩ	1
D632		Diode, 1N60 FM	1	R682		22kΩ	1
D636,637		Diode, DS442X	2	R683,684		27kΩ	2
RESISTORS				R685,686,687		15kΩ	3
All resistors are Carbon P-type ±5%, 1/4W unless otherwise noted.				R688		47Ω	1
R615		220kΩ	1	R689,690		4.7kΩ	2
R618,658,671		100kΩ	3	R677,678,680		680Ω	3
R619,627,646,648,602		10kΩ	5	R693		4.7kΩ	1
R613		8.2kΩ	1	R694		10kΩ	1
R624,672,673,675		27kΩ	4	R696		22kΩ	1
R625		390kΩ	1	R698		4.7kΩ	1
R626		27kΩ	1	R699,700		10kΩ	2
				R702		10kΩ	1
				CAPACITORS			
				C620,623		Electrolytic, 10μF	2
				C621		Electrolytic, 22μF	1
				C622,618,625		Electrolytic, 100μF	3
				C601		Electrolytic, 0.22μF	1
				C602		Electrolytic, 1μF	1
				C603,616		Electrolytic, 0.47μF	2
				C604,605,613,614		Semi conductive, 0.01μF ±20%	4
				C607,612		Semi conductive, 0.047μF ±20%	2
				C608		Electrolytic, 2.2μF	1
				C606		Electrolytic, 0.33μF ±20%	1
				C609,617		Electrolytic, 1μF	2
				C610		Electrolytic, 2.2μF	1
				C611		Electrolytic, 4.7μF	1

PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
AMSS LOGIC P.C.B. ASS'Y				POWER SUPPLY P.C.B. ASS'Y			
C615		Semi conductive, 0.01 μ F $\pm 20\%$ 25V	1	C952		Electrolytic, 100 μ F 10V	1
C619		Electrolytic, 10 μ F 16V	1	C953		Ceramic, 0.01 μ F +80-20% 50V	1
C624		Electrolytic, 1 μ F 25V	1	C954		Electrolytic, 100 μ F 16V	1
C626		Electrolytic, 2.2 μ F 25V	1	LEVEL METER ASS'Y			
C627		Electrolytic, 47 μ F 10V	1	309	141-4-230T-89273	P.C.B. Assembly, Level meter	1
C628,629,630		Ceramic, 0.01 μ F +80%-20%	3	SVR1,2	4-985T-00500	Fluorescent Display	1
C631		Electrolytic, 3.3 μ F 25V	1	SVR3,4	4-222T-39574	Semi fixed Variable Resistor 5K	2
C632		Electrolytic, 100 μ F 10V	1		4-222T-39575	Semi fixed Variable Resistor 10K	2
POWER SUPPLY P.C.B. ASS'Y					4-236T-10275	Plug, (8P)	1
308	141-4-233T-15272	P.C.B. Assembly, Power Supply	1	IC1,2		IC, BA658	2
Q901,902,916		Transistor, 2SD612	3	IC8		IC, RC4558P	1
Q903,917		Transistor, 2SB632	2	Q1,2,3		Transistor, 2SC536E or 2SC536F	3
Q904,906,908,912,914,919		Transistor, 2SC2320	6	Q4,5		Transistor, 2SC536F	2
Q905,907,909,913		Transistor, 2SD880	4	D1,2,3,4		Diode, 1S2473	4
Q910,921		Transistor, 2SC2320	2	D5		Diode, WZ056	1
Q911		Transistor, 2SD545	1	RESISTORS			
Q915,920		Transistor, 2SB596	2	All resistors are Carbon P-type $\pm 5\%$, 1/4W unless otherwise noted.			
Q918		Transistor, 2SA999	1	R1		10k Ω	1
D901,902,903,904		Diode, SR1K2	4	R6,14		56k Ω	2
D905,906,907,908		Diode, SR1K2	4	R7		220k Ω	1
D909,910,917,924		Diode, SR1K2	4	R8,16		18k Ω	2
D913,923		Diode, DS442	2	R9,17		220 Ω	2
D914		Diode, WZ061	1	R10,18		560k Ω	2
D915		Diode, WZ162	1	R11,19		3.3k Ω	2
D916		Diode, WZ192	1	R12,20		1k Ω	2
	141-2-368T-11000	Heat Sink	1	R13,21		18k Ω	2
	141-2-368T-19201	Heat Sink	1	R23		2.2k Ω	1
	141-2-368T-18700	Heat Sink	1	R24		2.2k Ω	1
RESISTORS				R27		18k Ω	1
All resistors are Carbon P-type $\pm 5\%$, 1/4W unless otherwise noted.				R28		820 Ω	1
R901,903		Metal, 68 Ω 1/2W	2	R29		Metal, 100 Ω 1W	1
R902		3.9k Ω	1	R15		220k Ω	1
R904		Flame Proof, 3.9 Ω	1	R30,31,32		220 Ω	3
R905,931		2.2k Ω	2	CAPACITORS			
R906		47 Ω	1	C3,6		Electrolytic, 1 μ F 50V	2
R907		47 Ω	1	C5,8		Electrolytic, 2.2 μ F 16V	2
R908		2.2k Ω	1	C4,7		Tantalum, 2.2 μ F $\pm 20\%$ 16V	2
R909		Flame Proof, 39 Ω	1	VOLUME P.C.B. ASS'Y			
R910		1.8k Ω	1	310	141-4-233T-15300	P.C.B. Assembly, Volume	1
R911,912,913,932		4.7k Ω	4	VR701,801	4-222T-79800	Variable Resistor, 10KA2-2	1
R914		100 Ω	1	VR703,803	4-222T-79900	Variable Resistor, 10KA1-2	1
R915,917,918,930,934		10k Ω	5	VR702,802	4-222T-78000	Variable Resistor, 50KA2-2	1
R916		4.7k Ω	1	R717,817		Carbon Resistor, 22k Ω $\pm 10\%$, 1/4W	2
R919,933		Solid, 560 Ω $\pm 10\%$ 1/2W	2		4-236T-10579	Plug, (12P)	1
R920,946		2.2k Ω	2	SWITCH LED (GREEN) P.C.B. ASS'Y			
R935		Flame Proof, 22 Ω	1	312	141-4-233T-15400	P.C.B. Assembly, Switch LED Green	3
R936,937		Metal, 56 Ω 2W	2			LED, SLG5532, PLAY/PAUSE/REC MUTE	3
R943		Metal, 22 Ω 1W	1				
R938		680 Ω	1				
R939,940		1k Ω	2				
R941		470 Ω	1				
R942		Flame Proof, 56 Ω	1				
CAPACITORS							
C901		Electrolytic, 2200 μ F 35V	1				
C903		Electrolytic, 330 μ F 25V	1				
C904		Electrolytic, 330 μ F 16V	1				
C905		Electrolytic, 1000 μ F 35V	1				
C906		Electrolytic, 1000 μ F 50V	1				
C907		Electrolytic, 2200 μ F 10V	1				
C909		Electrolytic, 4.7 μ F 25V	1				
C950		Electrolytic, 100 μ F 10V	1				

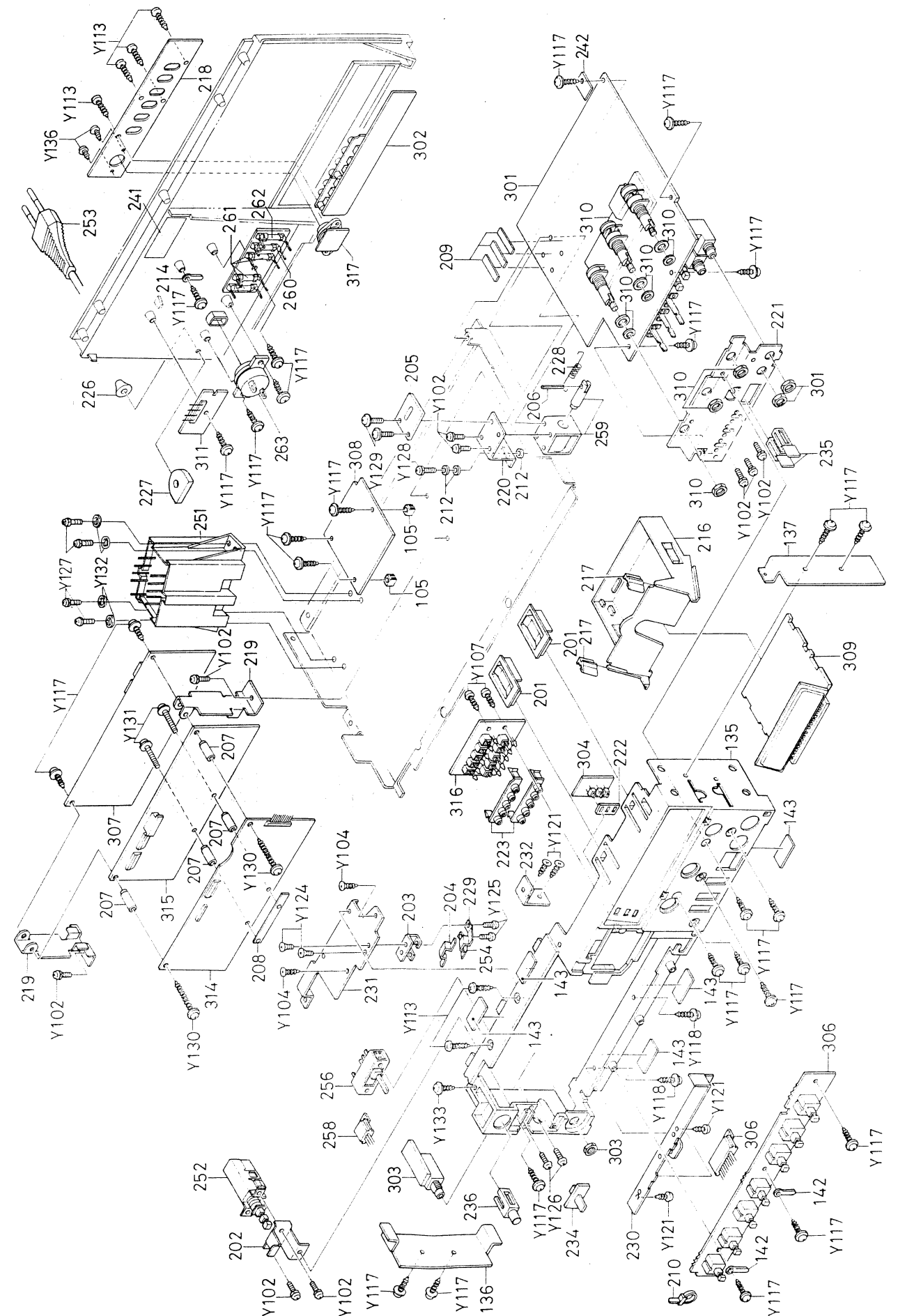
PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
SWITCH LED (RED) P.C.B. ASS'Y				AMSS MEMORY P.C.B. ASS'Y			
313	141-4-233T-15401	P.C.B. Assembly, Switch LED Red	1	R331		5.6k Ω	1
	4-235T-75300	LED, SLD5532, REC Socket (5P)	1	R332		100k Ω	1
			1	R333		100k Ω	1
				R335,336,337,338,339		100k Ω	5
				R340,341,342,343		100k Ω	4
				R344,345,346,347,348		100k Ω	5
POWER RELAY P.C.B. ASS'Y				R349,350,351,352		100k Ω	4
311	141-4-230T-90911	P.C.B. Assembly, Power Relay Plug (4P)	1	R353,362		22k Ω	2
	4-236T-13473	Capacitor, 0.047 μ F	1	R354,355,356,357		22k Ω	4
	4-223T-04700	Capacitor, 0.01 μ F	1	R358,359,360,361		22k Ω	4
	4-223T-04773	Capacitor, 0.01 μ F	1	R362		22k Ω	1
AMSS MEMORY P.C.B. ASS'Y				CAPACITORS			
314	141-4-233T-23600	P.C.B. Assembly, AMSS Memory Plug (3P)	1	C441		Electrolytic, 10 μ F 10V	1
	4-236T-10200	Plug (10P)	1	C442,444		Semi conductive, 0.022 μ F $\pm$ 20% 25V	2
	4-236T-10577	Plug (11P)	1			Ceramic, 470pF $\pm$ 20% 50V	5
	4-236T-10578	Plug (11P)	1				
	4-236T-16378	Plug (10P)	1				
	4-221T-04000	Resistor, RA-401 or (100k Ω x 10)	1				
	4-221T-02900	Resistor, RA-403, 404 (100k Ω x 5)	2				
IC409, 410, 411, 412, 413		IC, TC4011BP, TP4011BN or μ PD4011C	5				
IC414, 415		IC, TC4086BP	2				
IC416		IC, TC4017BP	1				
Q413,414, 415,416		Transistor, 2SC945 or 2SC536	4				
Q411,412, 417,418, 419,420		Transistor, 2SC945 or NR071	6				
Q421,422, 423,424, 425		Transistor, 2SC945 or NR071	5				
D415,416, 417,418, 419		Diode, 1S2473	5				
D419,420, 421,422, 423,424		Diode, 1S2473	6				
D425,426, 427,428, 429,430		Diode, 1S2473	6				
D431,432, 434,433, 435,436		Diode, 1S2473	6				
RESISTORS				AMSS CONTROL P.C.B. ASS'Y			
All resistors are Carbon P-type $\pm$ 5%, 1/4W unless otherwise noted.				315	141-4-233T-23700	P.C.B. Assembly, AMSS Control Plug (1P)	1
R301,302, 303,304, 305		390 Ω	5		4-236T-12400	Plug (7P)	1
R306,307, 308,309		390 Ω	4		4-236T-10574	Plug (8P)	1
R310,311		390 Ω	2		4-236T-10575	Socket (10P)	1
R312,313, 314,315, 316		22k Ω	5		4-235T-70097	IC, TC4011BP, TP4011BN or μ PD4011C	2
R317,318, 319,320		22k Ω	4	IC401, 404		IC, TC4069BP, TP4069BN or μ PD4069C	1
R321,323, 324		22k Ω	3	IC402		IC, LM555	1
R322		5.6k Ω	1	IC403		IC, TC4081BP, TP4081BN or μ PD4081C	1
R325		5.6k Ω	1	IC405		IC, TC4001BP, TP4001BN or μ PD4001C	1
R326		47 Ω	1	IC406		IC, LA3210B	1
R327		3.3k Ω	1	IC407		IC, LM324N	1
R328		100k Ω	1	IC408		Transistor, 2SC945	5
R329		100k Ω	1	Q401,402, 403,404, 405			
R330		150k Ω	1	D401,402, 451		Diode, 1S2473	3
				D403,404, 405		Diode, 1S2473	3
				D406,407, 408		Diode, 1S2473	3
				D409,410, 411		Diode, 1S2473	3
				D412,413, 414		Diode, 1S2473	3
				D452,454, 455		Diode, 1S2473	3
				RESISTORS			
				All resistors are Carbon P-type $\pm$ 5%, 1/4W unless otherwise noted.			
				R401		2.2k Ω	1
				R402		220k Ω	1
				R403		15k Ω	1
				R404		56k Ω	1
				R405		12k Ω	1
				R406		150k Ω	1
				R407		100k Ω	1
				R408		10k Ω	1

PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
AMSS CONTROL P.C.B. ASS'Y				AMSS SWITCH P.C.B. ASS'Y			
R409		220 Ω	1	LED406,		LED, SLD30GG, Green	4
R410		470k Ω	1	407,			
R411		22k Ω	1	408,			
R412,460		10k Ω	2	409			
R413,417,423		180k Ω	3	DIN SOCKET P.C.B. ASS'Y			
R414,418,424		56k Ω	3	317	141-4-233T-14900 4-235T-72200	P.C.B. Assembly, DIN Socket DIN Socket	1 1
R415		1.5M Ω	1	FIXING PARTS (CABINET & CHASSIS)			
R416,422		10k Ω	2	Y101		Pan Head Tapping Screw, 3x6mm	
R419		3.3k Ω	1	Y102		Pan Head Screw with Spring Washer, 3x6mm	
R420		1.8k Ω	1	Y103		Pan Head Tapping Screw, 2.6x6mm	
R421		560k Ω	1	Y104		Flat Head Tapping Screw, 3x6mm	
R425,428		180k Ω	2	Y105		Pan Head Screw, 2x10mm	
R427		220k Ω	1	Y106		Flat Head Screw, 3x8mm	
R429,430,431,432		27k Ω	4	Y107		Pan Head Tapping Screw, 3x8mm	
R433		3.3k Ω	1	Y108		Washer, 3x10x0.5mm	
R434		56k Ω	1	Y109		Flat Head Tapping Screw, 3x8mm	
R435		5.6k Ω	1	Y110		Pan Head Tapping Screw, 2.6x4mm	
R442,443		100k Ω	2	Y111		Binding Screw, 3x6mm	
R444,445,446		100k Ω	3	Y112		Binding Screw, 3x5mm	
R447,448,453		100k Ω	3	Y113		Bind Head Tapping Screw, 3x10mm	
R454		100k Ω	1	Y114		Bind Head Tapping Screw, 3x12mm	
R450,456,459		5.6k Ω	3	Y115		Pan Head Tapping Screw with Washer, 3x6mm	
R457		820k Ω	1	Y116		Bind Head Tapping Screw, 3x8mm	
R458		560k Ω	1	Y117		Pan Head Tapping Screw with Washer, 3x8mm	
R449		Flame Proof, 560k Ω	1/4W	Y118		Pan Head Tapping Screw with Washer, 3x10mm	
R461,462		1k Ω	2	Y119		Flat Head Tapping Screw, 3x10mm	
R465		56k Ω	1	Y120		Flat Head Tapping Screw, 3x14mm	
R466		560k Ω	1	Y121		Pan Head Tapping Screw, 3x6mm	
R467		27k Ω	1	Y122		Flat Head Screw, 4x25mm	
R452		560k Ω	1	Y123		Flat Head Screw, 4x10mm	
R470		470k Ω	1	Y124		Flat Head Screw, 2x4mm	
R471		47 Ω	1	Y125		Pan Head Screw, 2x4mm	
R472		Flame Proof, 100k Ω	1/4W	Y126		Pan Head Screw, 2.6x6mm	
R473		Flame Proof, 22k Ω	1/4W	Y127		Pan Head Screw with Spring Washer, 4x10mm	
CAPACITORS				Y128		Pan Head Tapping Screw with External Tooth Lock Washer, 3x8mm	
C401,403		Mylar, 0.022 μ F $\pm$ 10% 50V	2	Y129		Pan Head Screw with Washer, 3x8mm	
C402,409		Electrolytic, 33 μ F 10V	2	Y130		Pan Head Tapping Screw with Washer, 3x25mm	
C405		Ceramic, 10pF $\pm$ 5% 50V	1	Y131		Pan Head Screw with Washer, 3x25mm	
C406		Mylar, 0.0068 μ F $\pm$ 10% 50V	1	Y132		Washer, 4x10x1mm	
C407,417		Electrolytic, 1 μ F 10V	2	Y133		Bind Head Tapping Screw, 3x5mm	
C408		Ceramic, 470pF $\pm$ 20% 50V	1	Y134		External Tooth Lock Washer, 3mm	
C411,420		Tantalum, 3.3 μ F $\pm$ 20% 10V	2	Y135		Pan Head Screw, 3x8mm	
C412,415,419		Semi conductive, 0.022 μ F $\pm$ 20% 25V	3				
C413,427		Electrolytic, 4.7 μ F 10V	2				
C414,404		Electrolytic, 100 μ F 6.3V	2				
C416,424,429		Electrolytic, 1 μ F 10V	3				
C418		Ceramic, 0.001 μ F $\pm$ 20% 50V	1				
C421,422,423		Ceramic, 470pF $\pm$ 20% 50V	3				
C425		Electrolytic, 0.47 μ F 10V	1				
C428		Electrolytic, 4.7 μ F 10V	1				
C983		Electrolytic, 330 μ F 6.3V	1				
AMSS SWITCH P.C.B. ASS'Y							
316	141-4-233T-28600	P.C.B. Assembly, AMSS Switch	1				
S401,402,403,404,405	4-238T-10700	Switch	5				
S406,407,408,409	4-238T-10700	Switch	4				
S410	4-238T-10700	Switch	1				
	4-235T-74500	Socket (11P)	1				
	4-235T-74600	Socket (10P)	1				
LED401,402,403,404,405		LED, SLD30GG, Green	5				

CHASSIS EXPLODED VIEW



BLOCK DIAGRAM

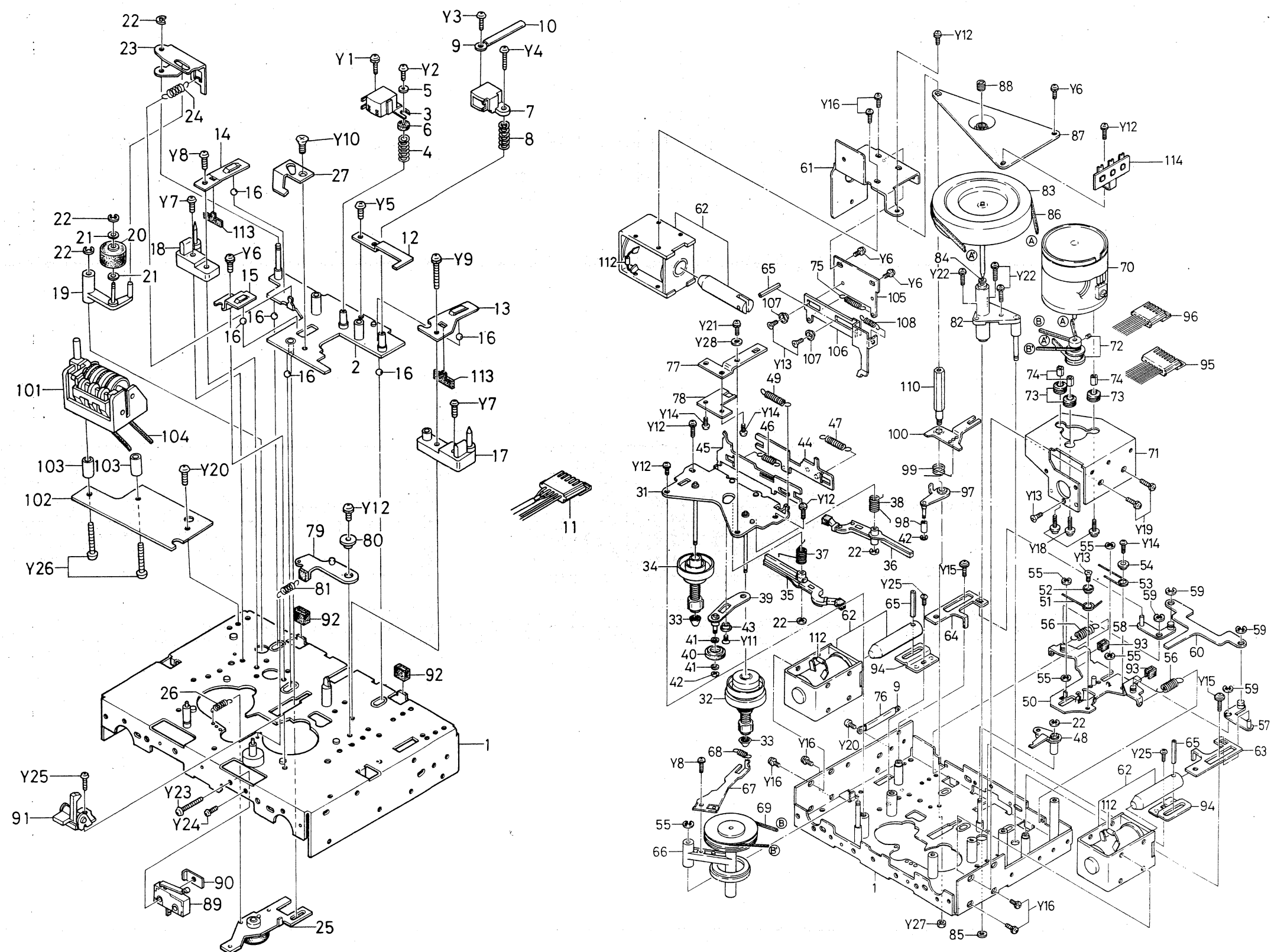
PARTS LIST

Key No.	Part No.	Description	Q'ty	Key No.	Part No.	Description	Q'ty
MECHANISM				MECHANISM			
1	141-0-311T-33400	Chassis Assembly, Mechanism Frame	1	58	141-0-742T-42401	Lever Assembly, Lever (60) and Slide (64) Connection	1
2	141-0-731T-76700	Slide Assembly, Head Slide	1	59	141-2-457T-23100	Special Washer, 3mm	3
3	4-242T-24200	Magnetic Head, Record/Play	1	60	141-2-742T-42500	Lever, Operation Arm	1
4	141-2-855T-45700	Spring Coil, Record Head Azimuth	1	61	141-2-369T-06800	Bracket Coil, Plunger mtg.	1
5	141-2-457T-33600	Special Washer, for Record/Play Head	1	62	4-264T-08171	Magnetic Coil, Plunger	2
6	141-2-445T-22300	Rubber Cushion, for Record/Play Head	1	63	141-2-731T-77100	Slide, Play Arm (Right)	1
7	4-242T-23372	Magnetic Head, Erase Head	1	64	141-2-731T-77200	Slide, Play Arm (Left)	1
8	141-2-855T-45800	Spring Coil, for Erase Head Azimuth	1	65	141-2-488T-02300	Pin, (63), (64) and (106) Connection, 3x6mm	2
9	141-2-472T-08800	Lug	2	66	141-0-742T-42610	Lever Assembly, Operating Pulley	1
10	141-2-490T-08230	Tube, 30mm	1	67	141-2-465T-17000	Stopper, REW Operation Arm	1
11	4-235T-72300	Socket, for Record/Play Head Fixer, for Head Lead	1	68	141-2-855T-46800	Spring Coil, Stopper (67) Rewinding	1
12	141-2-464T-34400	Spring Plate, Head Slide Weight	1	69	141-2-564T-22000	Square Belt, Pulley (66) Operation	1
13	141-2-853T-65000	Spring Plate, Head Slide Weight	1	70	4-527T-10372	Motor	1
14	141-2-853T-65100	Spring Plate, Head Slide Weight	1	71	141-2-378T-10200	Bracket Motor, Motor mtg.	1
15	141-2-853T-65200	Spring Plate, Head Slide Weight	1	72	141-0-661T-75101	Pulley Motor Assembly, Belt Operation	1
16	141-2-345T-00700	Steel Ball, Head Slide Weight	6	73	141-2-445T-22400	Rubber Cushion, Shock Absorber	3
17	141-0-243T-10800	Base Assembly, Cassette Location Setting	1	74	141-2-461T-35800	Pipe, Motor mtg.	3
18	141-0-243T-10900	Base Assembly, Cassette Location Setting	1	76	141-2-490T-15700	Tube, 30mm	1
19	141-0-545T-06500	Lever Pinch Roller Assembly, Pinch Roller mtg.	1	77	141-2-377T-25500	Bracket P.C.B., P.C.B. (78) mtg.	1
20	141-0-541T-03200	Pinch Roller Assembly, Tape Running	1	78	141-4-233T-22300	P.C.B. Assembly, Tape End Search	1
21	141-2-453T-30201	Washer, 2.6x4.7x0.25mm, Pinch Roller Slide	3	79	141-0-742T-42700	Lever Assembly, Back Tension Brake	1
22	141-2-457T-23000	Special Washer, 2mm	6	80	141-2-462T-59000	Boss, Lever (79) mtg.	1
23	141-2-742T-41700	Lever, Lever Pinch Roller Guide	1	81	141-2-855T-46900	Spring Coil, Lever (79) Rewinding	1
24	141-2-855T-45900	Spring Coil, Lever (23) Rewinding	1	82	141-0-571T-18401	Bearing Axis Assembly, Fly Wheel Axis	1
25	141-0-742T-54110	Lever Assembly, Play Idler	1	83	141-0-521T-10701	Fly Wheel Assembly	1
26	141-2-855T-46000	Spring Coil, Lever (25) Rewinding	1	86	141-2-561T-04700	Flat Belt, Main Belt	1
27	141-2-823T-01900	Lever Guide, Lever (25) Guide	1	87	141-2-524T-08900	Bracket Fly Wheel, Fly Wheel Axis	1
31	141-0-535T-03100	Bracket Reel Shaft Assembly, Reel Plate Mounting Stand	1	88	141-2-573T-11500	Bearing, Fly Wheel Shaft Axis	1
32	141-0-531T-12700	Reel Plate Assembly, Rewind Side	1	89	4-231T-36900	Switch, Miss Recording Prevention	1
33	141-2-465T-16900	Stopper, Reel Plate Stopper	2	90	141-2-365T-44900	Bracket Switch, Switch (89) mtg.	1
34	141-0-531T-12701	Reel Plate Assembly, Supplier Side	1	91	141-0-742T-42800	Lever Assembly, Miss Recording Prevention	1
35	141-0-742T-42000	Lever Assembly, Wind Reel Plate Brake	1	92	141-2-445T-22500	Rubber Cushion, Shock Absorber, Head Slide	2
36	141-0-742T-42100	Lever Assembly, Supplier Reel Plate Brake	1	93	141-2-445T-22600	Rubber Cushion, Shock Absorber, Play Slide	2
37	141-2-852T-59000	Spring Wire, Lever (35) Rewinding	1	94	141-2-823T-01800	Lever Guide, Plunger (62) Guide	2
38	141-2-852T-59100	Spring Wire, Lever (36) Rewinding	1	95	4-235T-84500	Socket, (7P)	1
39	141-0-742T-42200	Lever Assembly, Roller (40) mtg.	1	96	4-235T-72900	Socket, (5P)	1
40	141-0-662T-09700	Roller Assembly, F FWD Idler	1	97	141-0-742T-42900	Lever Assembly, Head Slide Lock	1
41	141-2-453T-30100	Washer, 2.1x4x0.13mm, Roller (40) Slust	1	98	141-2-461T-35900	Pipe, Lever (97) mtg.	1
42	141-2-457T-23800	Special Washer	2	99	141-2-852T-59400	Spring Wire, Lever (97) Rewinding	1
43	141-2-462T-58400	Boss, Lever (39) mtg.	1	100	141-0-742T-43000	Lever Assembly, Cue/Review Arm	1
44	141-0-731T-76800	Slide Assembly, F FWD	1	101	141-2-811T-07700	Counter, Tape Running	1
45	141-2-731T-76900	Slide, REW	1	102	141-2-812T-08900	Bracket Counter, Counter (101) mtg.	1
46	141-2-855T-46300	Spring Coil, Connection	1	103	141-2-461T-36000	Pipe, Counter (101) mtg.	2
47	141-2-855T-46400	Spring Coil, F FWD Rewinding	1	104	141-2-564T-22100	Square Belt, Counter (101) Operation	1
48	141-0-742T-42300	Lever Assembly, F FWD Arm	1	105	141-2-747T-18900	Bracket Lever, Lever (106) mtg.	1
49	141-2-855T-46500	Spring Coil, F FWD Arm Rewinding	1	106	141-2-742T-43100	Lever, Lever (100) Operation	1
50	141-0-731T-77000	Slide Assembly, Play	1	107	141-2-462T-59200	Boss, Lever (106) mtg.	2
51	141-2-852T-59200	Spring Wire, Head Slide Operation (Upper)	1	108	141-2-855T-47000	Spring Coil, Lever (106) and Plunger Connection	2
52	141-2-462T-58600	Boss, Spring Wire (51) mtg.	1	109	4-264T-08271	Magnetic Coil, AMSS	1
53	141-2-852T-59300	Spring Wire, Head Slide Operation (Lower)	1	110	141-2-421T-30300	Special Screw, Lever (97), (100) Shaft	1
54	141-2-462T-58700	Boss, Spring Wire (53) mtg.	1	112	141-2-445T-23600	Diode, SR1K2	3
55	141-2-457T-25100	Special Washer, 2.5mm	5	113		Rubber Cushion, Shock Absorber	2
56	141-2-855T-46600	Spring Coil, Slide Ass'y (50) Rewinding	2	114	4-237T-01501	Terminal Board, Lead Relaytion	1
57	141-0-742T-42400	Lever Assembly, Lever (60) and Slide (63) Connection	1	115	141-4-488T-02400	Pin, Lever (106) Connection 3x16	1
				75	141-2-855T-47100	Spring Coil, Lever (106) Return	1
				84	141-2-457T-35400	Special Washer 2.3x5x0.5mm	1
				85	141-2-457T-35500	Special Washer 2.1x6x0.5mm	1

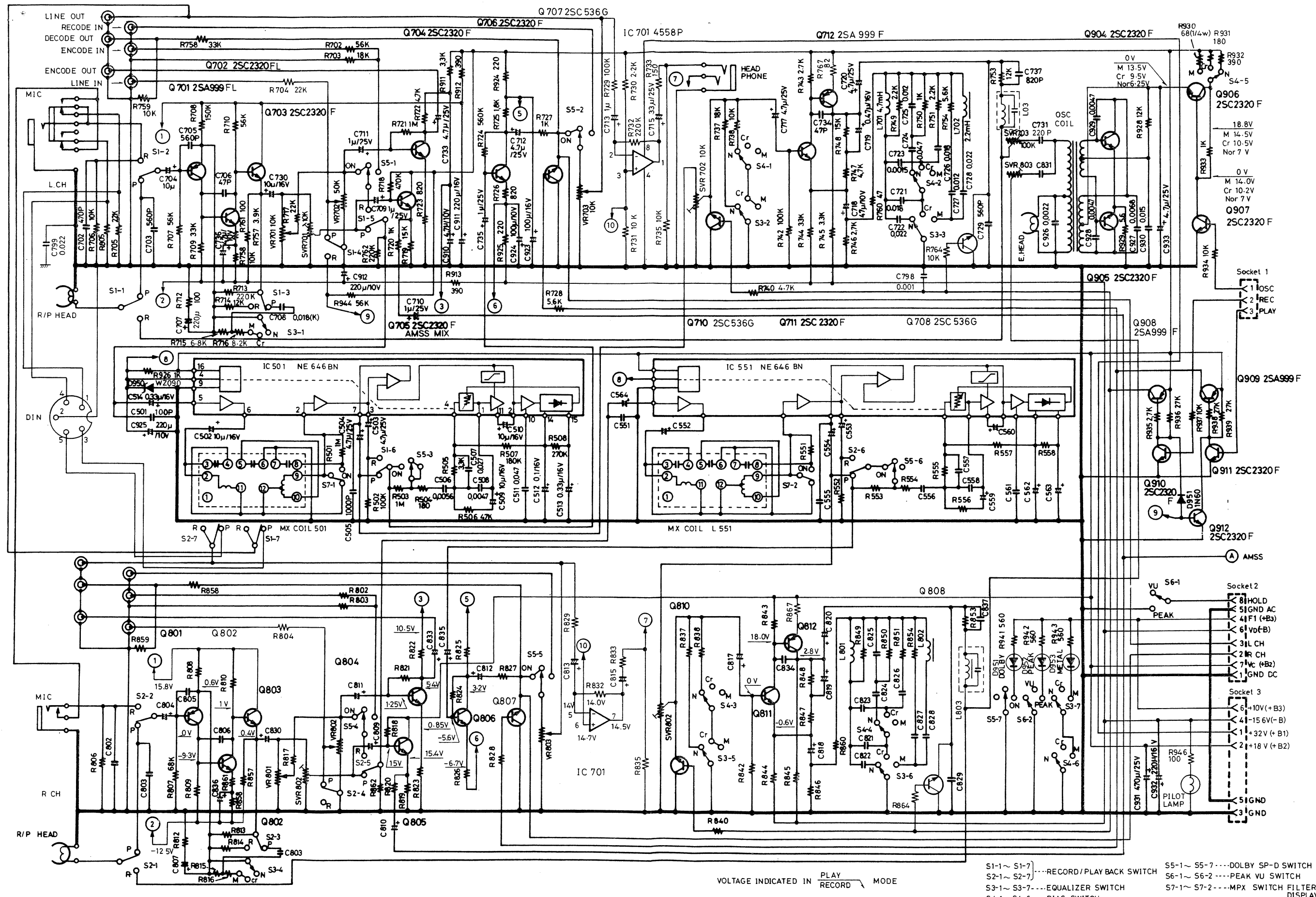
PARTS LIST

Key No.	Part No.	Description	Q'ty
MECHANISM			
Y1		Pan Head Screw with Spring Washer, 2x4mm	1
Y2		Binding Screw, 2x5mm	1
Y3		Binding Screw, 2x5mm	1
Y4		Binding Screw, 2x7mm	1
Y5		Pan Head Screw, 2.6x3mm	1
Y6		Pan Head Screw, with Spring Washer, 2.6 x4mm	4
Y7		Pan Head Screw, 2.6x10mm	2
Y8		Pan Head Screw with Spring Washer, 2.6x8mm	2
Y9		Pan Head Screw with Spring Washer, 2.6x16mm	1
Y10		Flat Head Screw, 2.6x4mm	2
Y11		Flat Head Screw, 2x4mm	1
Y12		Pan Head Screw with Spring Washer, 2.6x5mm	6
Y13		Flat Head Screw, 2.6x4mm	4
Y14		Pan Head Screw, 2.6x4mm	2
Y15		Pan Head Screw with Washer, 2.6x4mm	2
Y16		Pan Head Screw with Spring Washer, 3x5mm	5
Y18		Pan Head Screw with Washer, 2.6x7mm	3
Y19		Pan Head Screw with Spring Washer, 3x6mm	2
Y20		Pan Head Tapping Screw, 2.3x6mm	1
Y21		Pan Head Screw with Spring Washer, 2.6x6mm	1
Y22		Pan Head Tapping Screw, 2.6x6mm	3
Y23		Pan Head Screw, 2.3x10mm	1
Y24		Pan Head Screw, 2.3x4mm	1
Y25		Pan Head Tapping Screw, 2.6x5mm	3
Y26		Pan Head Screw with Spring Washer, 3x14mm	2
Y27		Hexagon Head Nut, 2.6mm	1
Y28		Washer, 2.6x5.8x0.5mm	1
Y29		Pan Head Tapping Screw, 2.6x5mm	1

MECHANISM EXPLODED VIEW



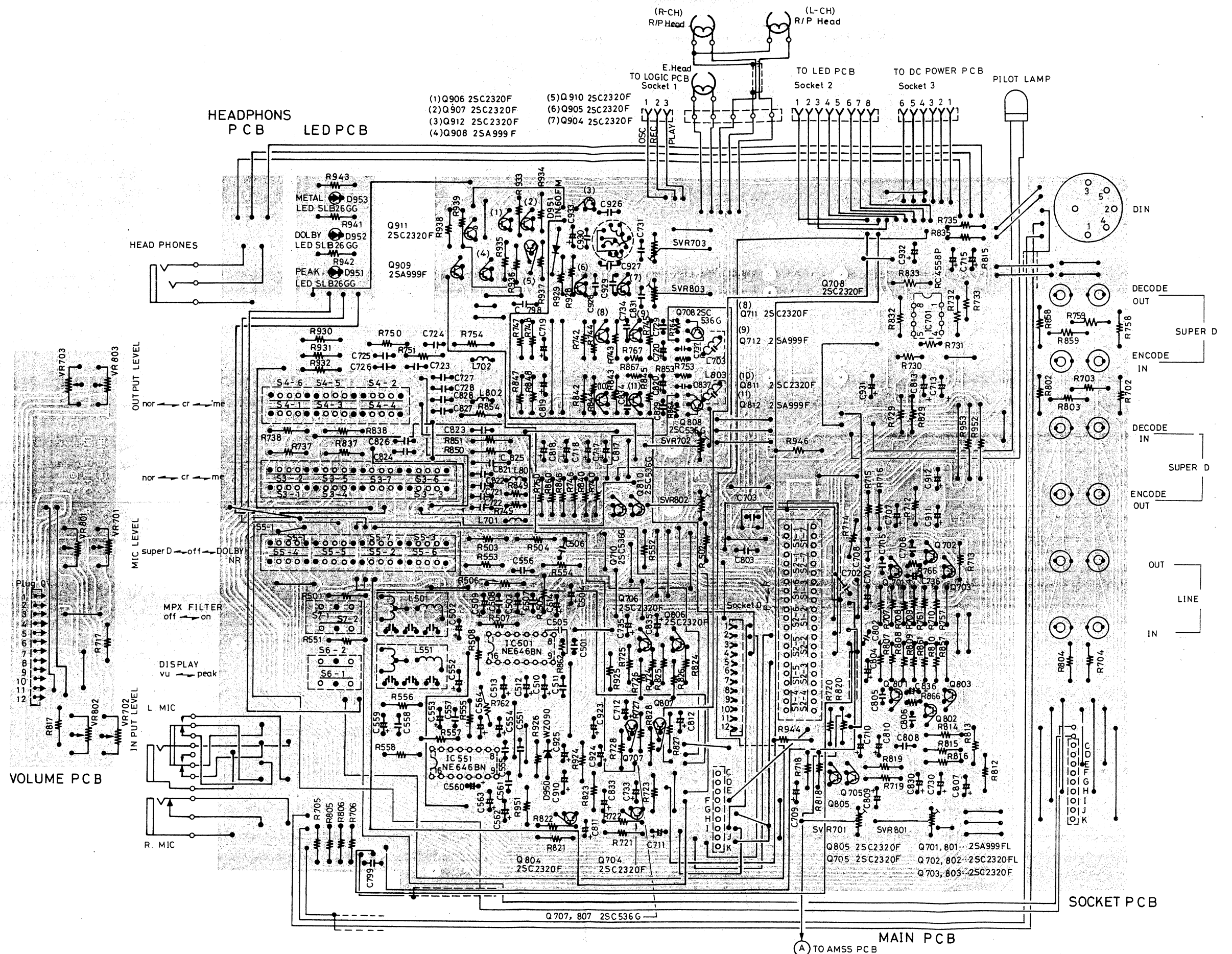
SCHEMATIC DIAGRAM (MAIN AMP)



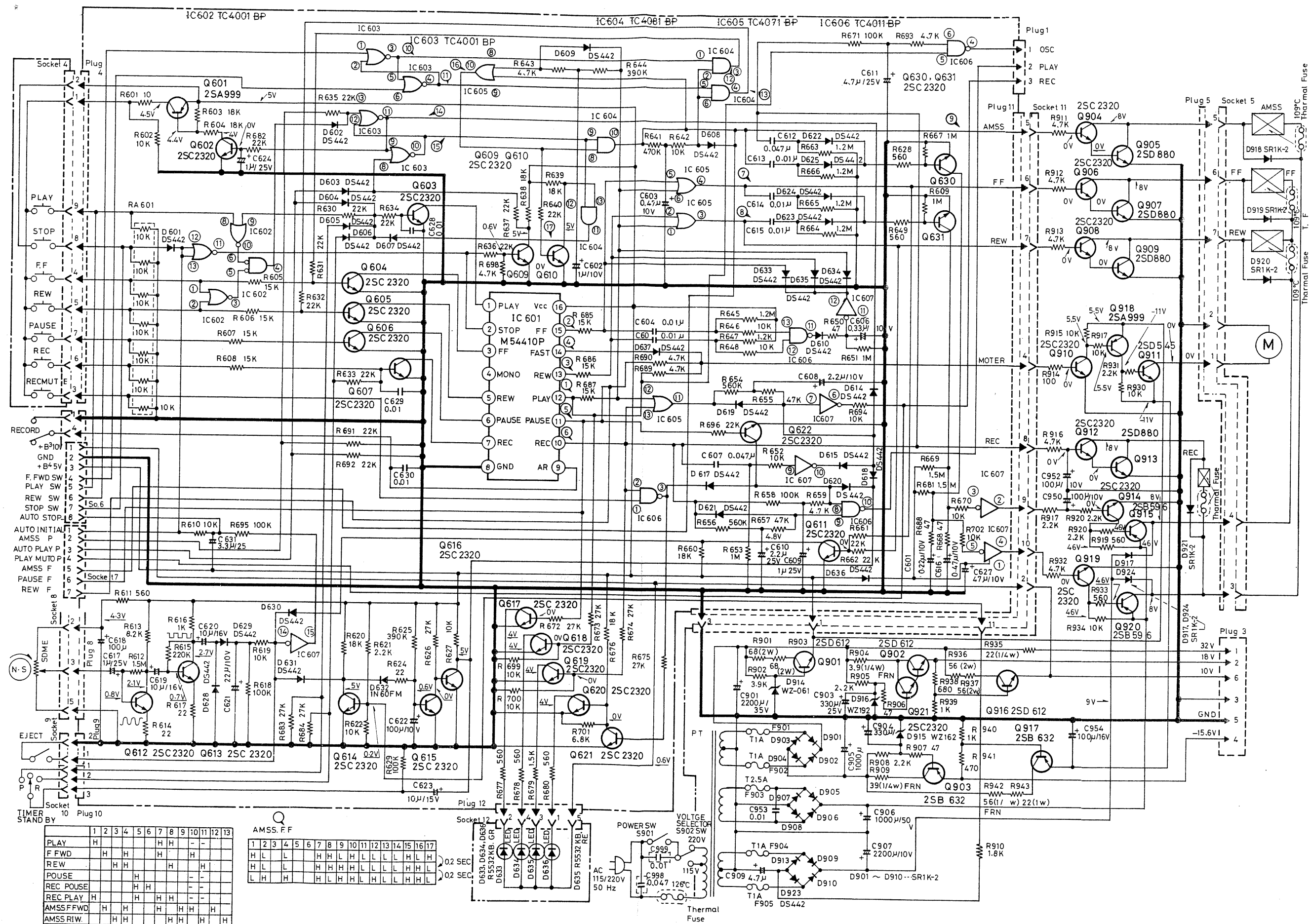
VOLTAGE INDICATED IN PLAY RECORD MODE

- S1-1 ~ S1-7 RECORD/PLAY BACK SWITCH
- S2-1 ~ S2-7 DOLBY SP-D SWITCH
- S3-1 ~ S3-7 PEAK VU SWITCH
- S4-1 ~ S4-6 BIAS SWITCH
- S5-1 ~ S5-7 DOLBY SP-D SWITCH
- S6-1 ~ S6-2 PEAK VU SWITCH
- S7-1 ~ S7-2 MPX SWITCH FILTER DISPLAY

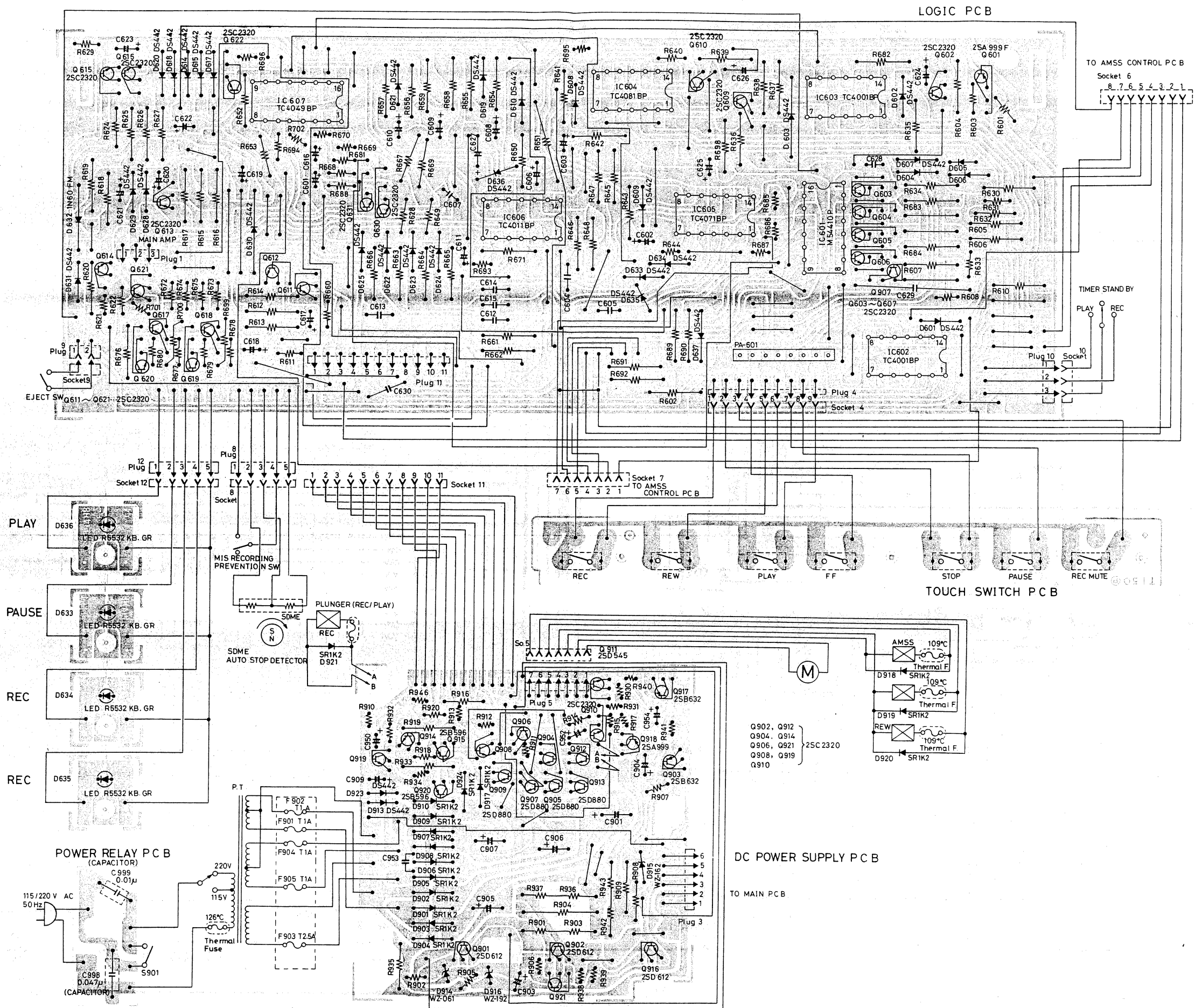
WIRING DIAGRAM (MAIN AMP)



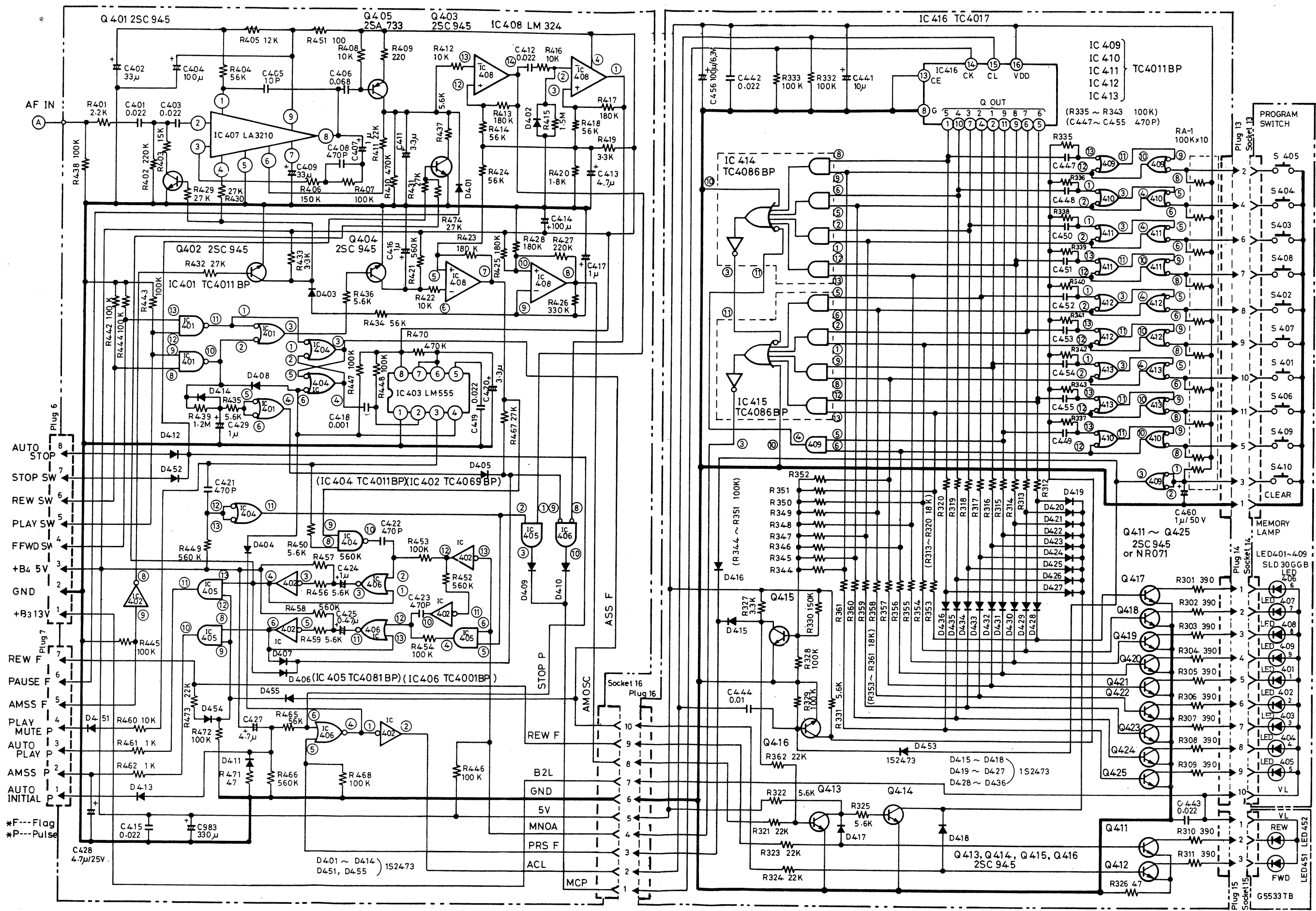
SCHEMATIC DIAGRAM (POWER SUPPLY/MECHANISM CONTROL)



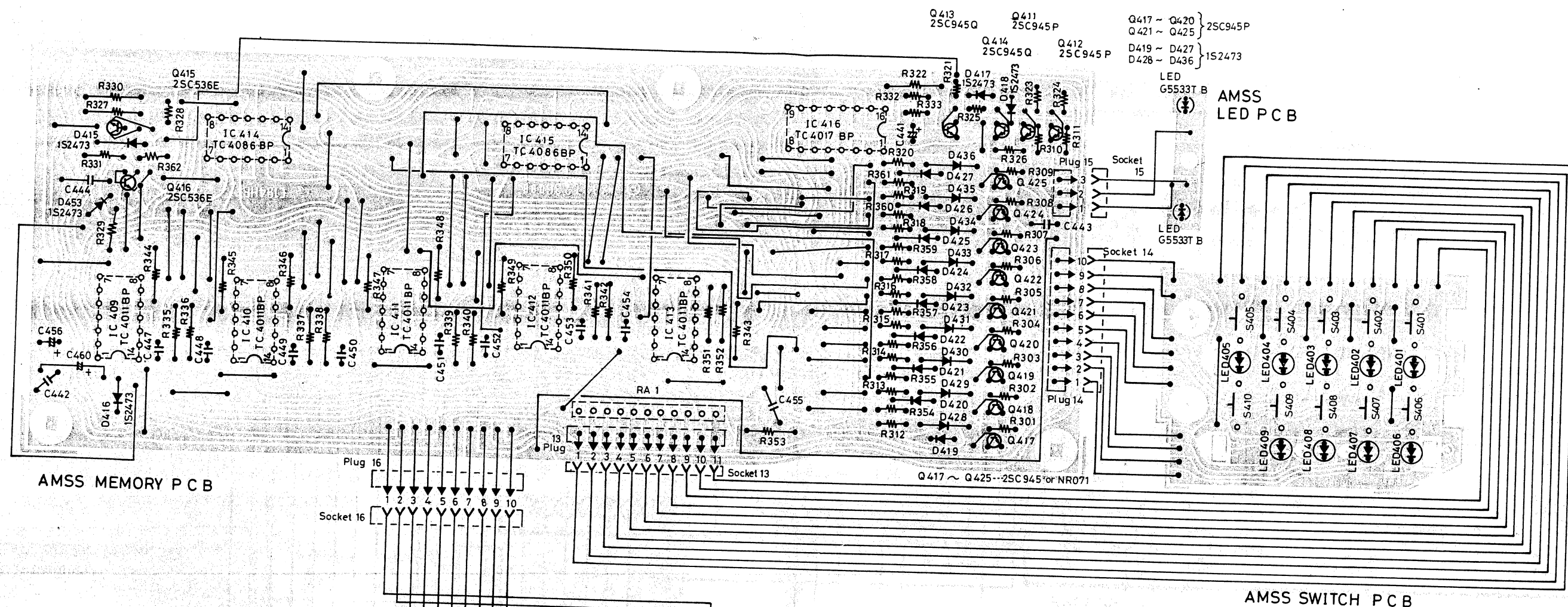
WIRING DIAGRAM (POWER SUPPLY / MECHANISM CONTROL)



SCHEMATIC DIAGRAM (AMSS CONTROL/MEMORY)

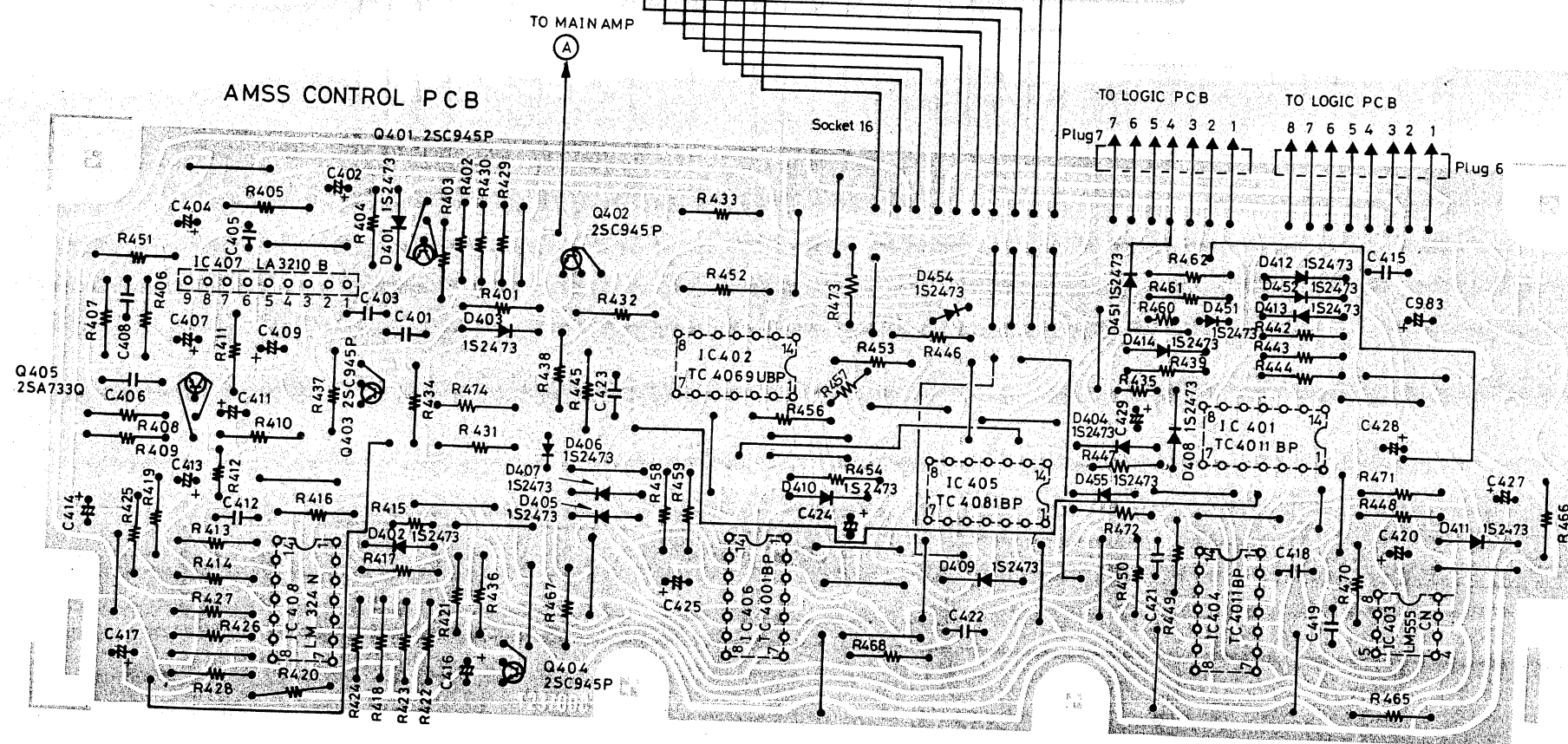


WIRING DIAGRAM (AMSS CONTROL/MEMORY)



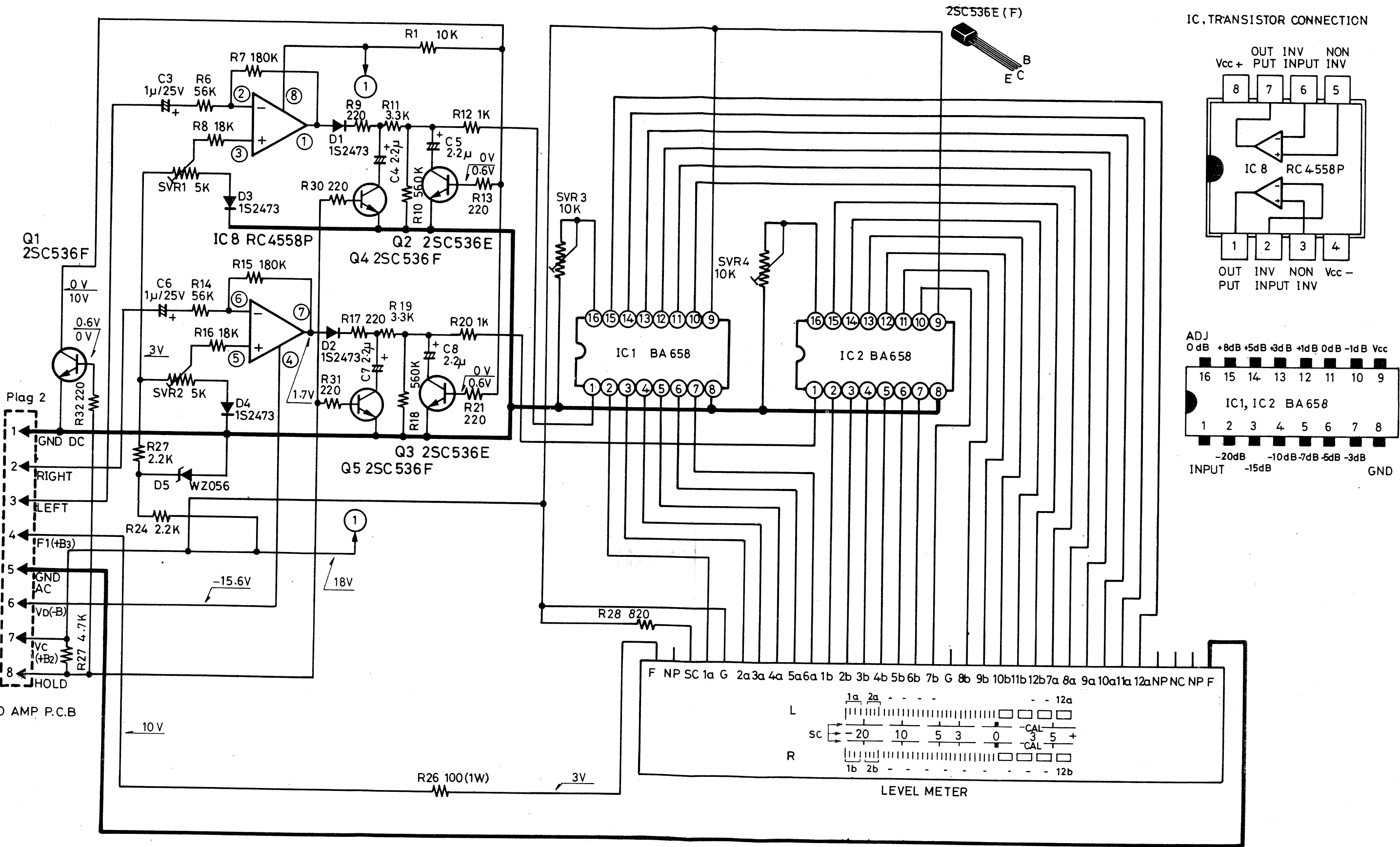
AMSS MEMORY PCB

AMSS SWITCH PCB



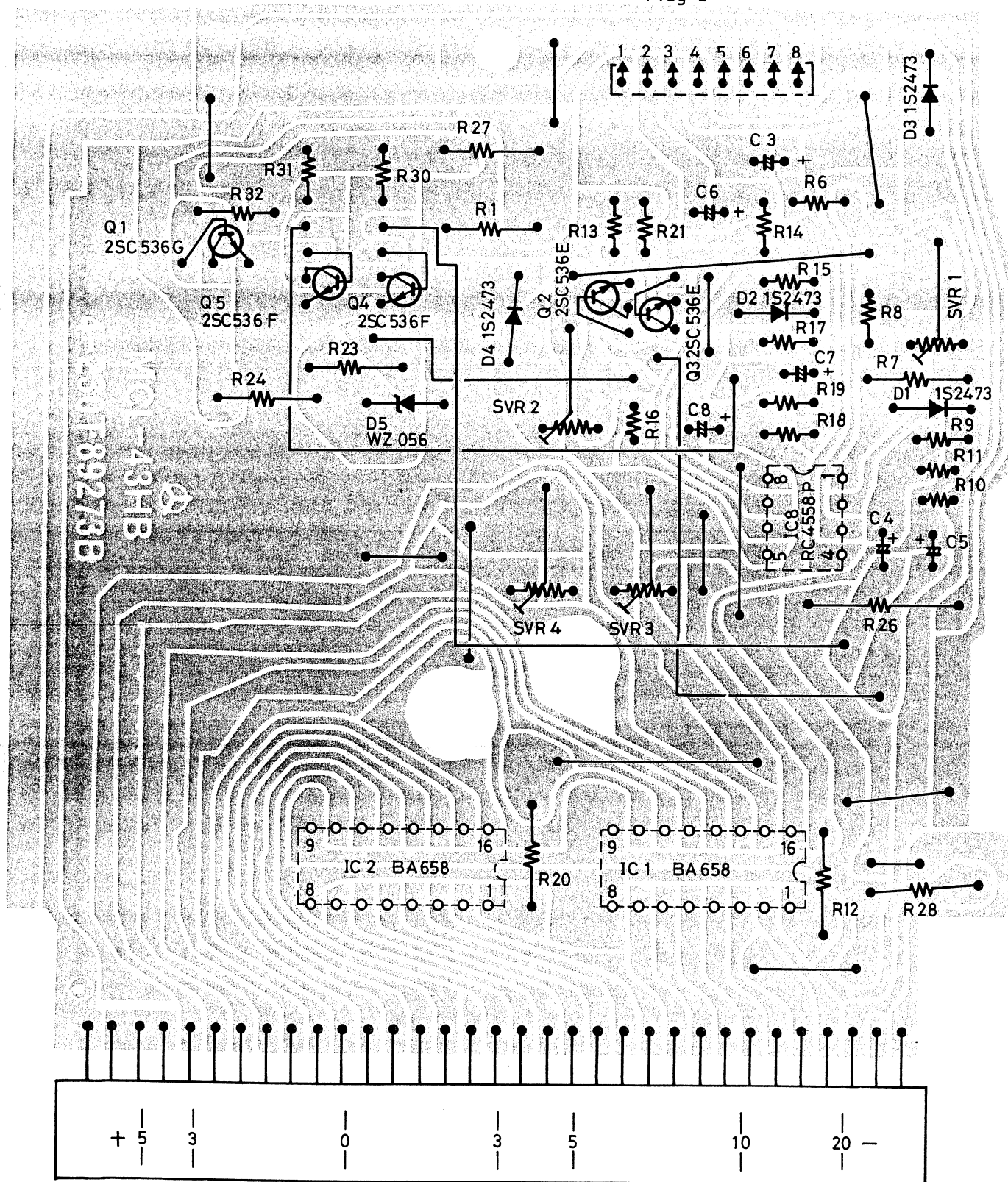
AMSS CONTROL PCB

SCHEMATIC DIAGRAM (LEVEL METER)



LEVEL METER P C B

TO MAIN AMP
Plug 2



LEVEL METER